PHOTO-ERA

The American Journal of Photography

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The American Journal of Photography

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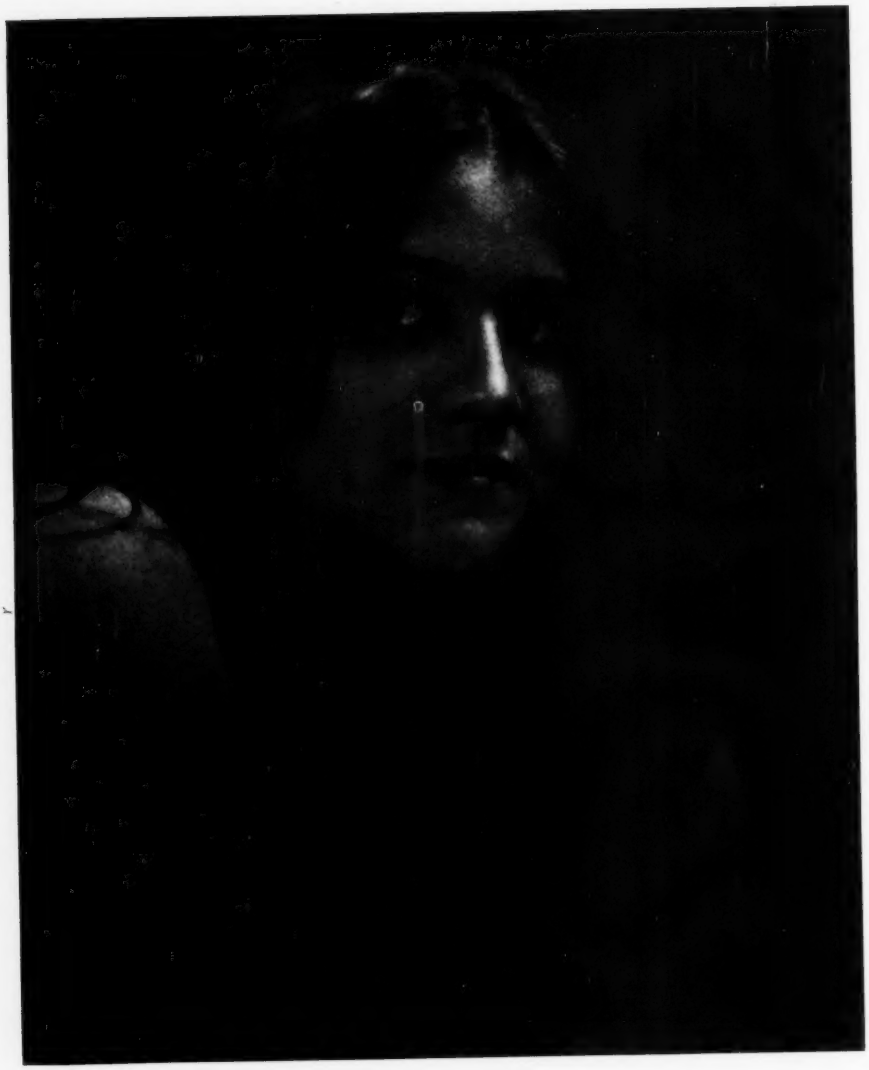

FERN
GERHARD SISTERS
WOMEN'S FEDERATION OF THE P. A. OF A.

PHOTO-ERA

The American Journal of Photography

Vol. XXXII MARCH, 1914 No. 3

The Influence of Women in the Photographic Profession

PEARL GRACE LOEHR

President, Women's Federation of the P. A. of A.

THE workers of the world who have won renown in any profession or in any art are those who have gone beyond the rules which have governed that profession or art.

A comparison of any work which the world has recognized as great with one that is rated as good, reveals the fact that they are based upon the same fundamental law, and have been wrought in obedience to the same rules; but one is born to live, the other to die.

Why is one great and the other mediocre? If the law and the application of the law have been recognized and followed by each worker, why are not both products equal in value? One worker has studied the law and followed the rules, and they become the limit of his achievement — he has the "letter of the law that killeth." The other worker has likewise studied the law and followed the rules — not as the limit of his endeavor, but as his guidance; for he also has grasped the spirit of the law and it is the spirit which kindles the undying flame that lights every great work.

For a worker to be able to break away from the accepted rule and guide, and also to grasp the spirit of the law in his work, there must be a cause that has produced some great emotion, something that has set thoughts on fire with anticipation; there must be the excitement of a conflict and a struggle for things before unattainable.

It is but a few years since a new social and a new industrial condition, profoundly affecting the life of women, manifested itself in the world. A deep-seated evolutionary law worked so inexorably and so silently that the condition came upon the great mass of women unawares, and they found themselves forced by the thousands from the sheltered home into the business-world. It is this condition which has awakened emotions that seek expression in many fields of endeavor. It has caused a revolution in the status of women and in the attitude of mind of women the world over. Women were not equipped with the knowledge, nor had they acquired the training for the business and professional world. They were received as interlopers, unskilled laborers who served for lower wages. At first the struggle seemed a losing one; but gradually, out of the conflict with new conditions and the confusion that surrounded the early efforts, have come women who are finding their way and establishing their rights by the quality of their work to enter and work ably in many of the professions and industries of the world.

Photography is a business which is particularly suited to women, and the progress and improvement in the work of that profession within the past few years leads to the question whether it has been brought about through the influence of the women who have entered it as a life-work.

The photographer's tool is the camera. With this instrument any photographer can make "good, straight photographs," which had long been regarded as the end for which it was made — a mechanical thing producing mechanical work.

Entering the profession unhampered by training in the rigid rules said to govern the picture-making tool, women broke the rules and failed, went beyond the rules and caught glimpses of new things, and, with that painstaking conscientiousness possessed by women who are in earnest, they went back to the beginning and have worked out in their own way the making of photographs.

The women who have chosen this work have brought to it those qualities of character and the sentiments they formerly confined to home-life. Their love of beauty and truth, backed

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PORTRAIT OF A CHILD — SARA F. T. PRICE

by the emotion kindled by the struggle for a place among the world's workers, shows in the product of their hands and minds. They have brought more than study and training, they have brought a fine aptitude in an understanding both of the working-materials and of human nature, and this finds expression in the work of the women who are rapidly becoming leaders.

The influence of such work is being felt throughout the profession. Women in their enthusiastic efforts at self-expression, with a clear vision of things within and beyond the limits formerly set as a standard of work, are making pictures that are filled with vitality; some are almost seers in their ability to portray character and show forth the inner life of the subject. By intuition, it seems, they have grasped the truth that the work of the camera is not the end, but only a means by which the individuality of the worker, thoroughly conversant with her materials and her tools, may portray the inner character.

They owe this power to their sensitive and sympathetic feeling which they have for their work, and their ability to secure in instantaneous flashes the expression of the real character. They make of themselves merely avenues through which to express an inner emotion with the aid of the camera.

A few years ago a well-known critic asserted: "Photography is still only a tool almost uninfluenced by the mind of the operator." This criticism does not apply to-day. Women of different temperaments are working as operators and they stamp their mind, sentiment and

WOMEN'S FEDERATION
OF THE P. A. OF A.

ROBERT FRANCES AND MARY ALLEN

individuality upon their work as surely and as clearly as did Innes or Corot.

The helpfulness of a movement must be judged by the importance of the message it brings. The period of storm and stress that attended the early transition of women from home to business is slowly ending. As the conflict clears away, we find that women workers who have made a place for themselves are bringing to the professions into which they have been forced the message of a study of a subject for its true meaning, individual effort and a higher standard of work.

To the profession of photography, which is adding so much to the education and culture of the world by its use in the various fields of science, industry and art, women have brought a newer and a finer quality, for, added to the mastery of the technicalities of picture-making with the camera, they have brought the spirit which is lifting photography to its place as one of the fine arts.

NEVER admit defeat. Realize your mistakes and correct them — but admit failure, never! The man or woman who admits defeat, is lost.

Miss Reineke.

Water for Photographic Purposes

DAVID J. COOK

SCIENCE distinguishes two great classes of changes in matter — physical and chemical. Physical changes are superficial and leave the substance in its main properties at all times the same. Chemical changes directly affect the nature of the substance, giving new forms of matter with different properties.

A good example may be had of the changes herein referred to, and one also that will explain the purpose of this article, by dissolving a few crystals of silver nitrate in water. If the silver nitrate is pure, and if the water is pure also, we get a colorless physical solution, that is, the solid (silver nitrate) is divided into an infinite number of particles, which, intermingling with the particles of the solvent (water), form a clear, colorless solution, and the greater the volume of the solvent, or the more the solution is diluted, the finer the state of division of the solid (silver nitrate). Note that the physical solution is simply the transformation of the solid (silver nitrate), whose essence and main properties have not altered, to the liquid form.

On the other hand, should the water be impure into which the silver nitrate is dissolved; for instance, should it be impregnated with sodium chloride (salt), the solution will take on a milky appearance immediately and a white precipitate will be deposited on the bottom of the vessel. In this case it is quite evident that a change has taken place other than purely physical, and if we analyze the precipitate we shall find it to be made up of silver and chlorine (silver chloride). The silver of the silver nitrate, having greater affinity for the chlorine of the sodium chloride, has parted from the nitrogen and oxygen and formed a union with the chlorine; likewise the nitrogen, oxygen and sodium have combined and we now have two new substances. The presence of salt in the water was responsible for the chemical change which took place in transforming the silver nitrate to the liquid state.

It is just such changes as these that are at the bottom of many troubles in making up stock-solutions and in chemical photographic manipulations in general, which should teach that in order to avoid defects due to chemical changes that are not desirable, it is necessary that pure water be used in all solutions and manipulations where water is necessary. Water is likely to contain not only foreign mineral and vegetable matter, but also gases and air. By reason of its great solvent power it dissolves a portion of whatever it comes in contact with; therefore, water, as it occurs in and on the earth, is probably never absolutely pure.

The most prevalent foreign substances in common water, besides air (oxygen and nitrogen) and matter held in mechanical suspension (vegetable and animal matter), are: carbonic acid, ammonia, sodium sulphate, sodium chloride, magnesium sulphate, magnesium chloride, magnesium carbonate, calcium sulphate, calcium carbonate, sulphureted hydrogen, potassium sulphate, potassium chloride, phosphates, bromides and iodides of calcium, aluminum sulphate, ferrous carbonate, silica, etc. Any of these substances may be found in ordinary water, and, if present in such quantities as to cause precipitation or discoloration of the solution, should be rejected as unfit for photographic purposes; however, water as generally supplied from faucet or well which is good for drinking-purposes and for cooking and does not curdle soap, may be used for most ordinary purposes without serious consequences.

Water exists in three states: solid, liquid and vaporous. Water freezes at 32 degrees and boils at 212 degrees Fahrenheit. Pure water is colorless, tasteless and odorless at ordinary temperatures, and should remain so upon being heated to boiling. It should be perfectly neutral to litmus paper, turning neither red paper to blue nor blue paper to red. Pure water for photographic purposes may be taken to mean freedom from gross impurities.

The quality of water and quantity of impurities contained therein is as varied as location, but all may be conveniently classed under two heads of soft and hard. Hard water contains more or less calcareous or magnesium salts or other impurities, the presence of which curdles soap. It is called hard by reason of its action on soap, which, instead of dissolving in the water to form a lather, cleansing the skin, combines with the salts to form an insoluble lime or magnesium soap that appears as a precipitate or scum on the surface of the water. Hard water is of two kinds — that of temporary hardness and that of permanent hardness. Boiling expels the carbon dioxide and thus precipitates the carbonates of calcium or magnesium which often appear as a crust on boilers and kettles. The temporary hard water is softened in that way. Permanent hard water contains calcium sulphate

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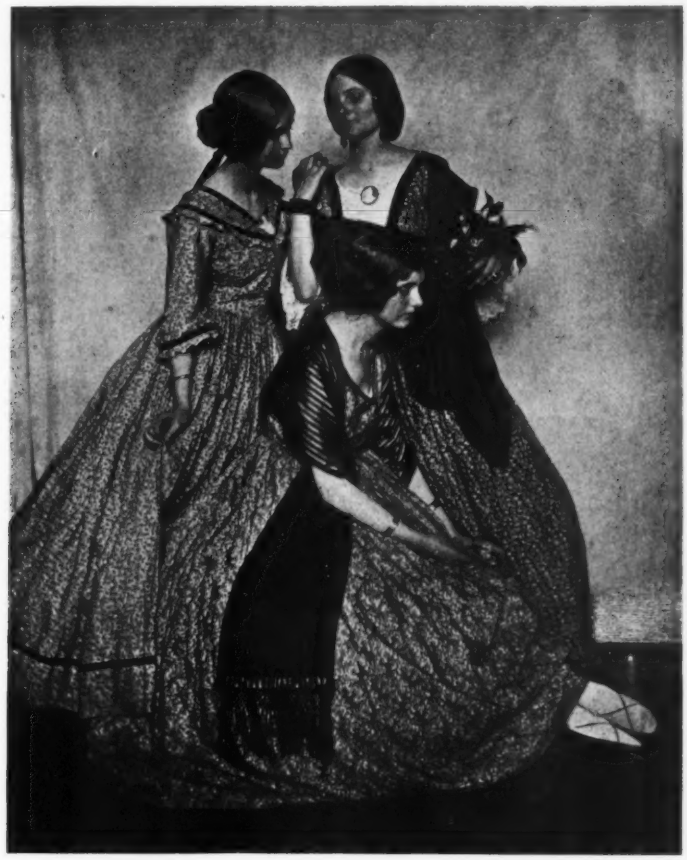

THE FULLER SISTERS — ALICE BOUGHTON

or magnesium sulphate and is not softened by boiling, but can be softened by treating with sodium carbonate.

Soft water contains but a very small amount of impurities, and when used in washing easily forms a lather with soap. Water falling after a long rain and melted snow or natural ice is the purest of soft water, and suitable for most chemical purposes. To obtain it as pure as possible it must be collected in large earthen vessels in the open and at considerable distance from buildings and after the first fall of rain or snow, otherwise it will be contaminated with dust, carbonic and nitric acids, carbonate of ammonia and other impurities which float in the atmosphere and are washed from off the roofs.

Rain is the source of land-water, it having been taken up by evaporation from the ocean, lakes and rivers, to be returned again. As it falls, a part flows off as surface-water in brooks and rivers, a part sinks into the earth, slowly percolates through earth and rocks and finally comes to the surface in springs and driven wells. The two sorts of water from rivers and springs differ considerably in character of their impurities. River-water is less pure than good spring-water, which latter usually contains mineral impurities, whereas river-water, though less impregnated with saline matter, because made up in considerable part of rains, is, however, much more likely to have mechanically suspended in it insoluble matter of an earthy nature and decomposed vegetable and animal matter, sewage, etc., which impairs its transparency.

Spring-water depends largely for its purity on the strata through which it flows, being

THE SPIDER
VIRGINIA M. PRALL
WOMEN'S FEDERATION OF THE P. A. OF A.

"THIS LITTLE PIG WENT TO MARKET" GOODLANDER SISTERS
WOMEN'S FEDERATION OF THE P. A. OF A.

purest when it passes through sand or gravel or where the prevailing rock-formation is granite.

Well-water, like that from springs, is likely to contain various mineral impurities. As a rule, the purity of the water of a well will be in proportion to its depth and the frequency with which it is used.

Lake-water, if taken from the deep where it is greenish-blue, is usually pure and wholesome, but if taken from near the shore it is unwholesome on account of contamination with sewage and decomposed vegetable and animal matter, and ought never to be used for photographic purposes. Organic matter in water tinges it yellow, and this organic material is either dead or living. Micro-organisms, so minute that millions may exist in a cubic centimeter and be entirely invisible, are contained in all stagnant ponds and in much river-water.

Pure water is incapable of putrefaction, but ordinary water containing even a small quantity of organic matter in solution speedily undergoes decomposition, even in closed vessels. This is particularly the case with water kept in wooden casks or open cisterns into which leaves and insects may be driven by the wind. Of course, mineral water such as used for medicinal purposes, sulphur water and chalybeate water containing compounds of iron in solution are totally unfit for our purpose.

All sorts of water may be purified by distillation. The process consists in vaporizing it and then cooling and condensing it again to a liquid. The first and last pints that come over, however, should be rejected as they contain ammonia and other substances which vaporize at a lower and higher temperature than 212° F. Most substances less volatile than water are left behind and it is mainly pure water that is condensed. On evaporating a drop of distilled water on platinum foil, there should be no residue, but if ordinary water be evaporated, a deposit is left, and if it be organic matter, smoke and a peculiar odor will be evolved as the residue becomes dry and is charred. Distilled water has a flat taste and to keep it pure must be hermetically sealed in a glass or earthen container, away from the air and dust. Distilled water is

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SUSPENSE NANCY FORD CONES

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undoubtedly best for making up solutions containing substances which readily oxidize on exposure to air. Next to distilling, boiling and filtering the water will eliminate a great many of the objectionable substances. (Pyro will keep as long again in water that has been well boiled.) Boiling is sufficient to precipitate the carbonate of lime and magnesia, but the sulphates still remain.

Filtration does not remove the salts in solution, but the organic and other matter in suspension, the presence of which gives to it a turbid or muddy appearance, is eliminated by this means. The water-supply of many cities is now freed from objectionable matter by filtering it through several feet in thickness of sand and gravel extending over a large area. After a day or so the water is diverted to another similar filter, the first being allowed to dry for an equal time. In this way the water is freed from all organic matter, which is destroyed upon exposure to the air. Filtering through small charcoal or sand filters, cotton, cloth filter bag, faucet filters, etc., are of little utility, except to remove earthen matter. Filtering through a "Pasteur filter," or one of the porous stone filters which come from Germany, is most serviceable. Also the brown filter-paper, which comes in packages of various sizes, and which is carried in stock by nearly every photographic supply-house, and which also comes from Germany, is to be recommended.

Decantation consists in allowing water containing undissolved matter to precipitate or deposit its solid at the bottom of the receptacle. The clear solution is then poured or drawn off, leaving the sediment undisturbed behind. If the water to be purified be placed in a barrel or hogshead, and two grains of potassium-aluminum sulphate (common white alum), previously dissolved in a little hot water, be added to each gallon of water, it will facilitate matters greatly. It should be allowed at least forty-eight hours to settle, and when distilled water cannot conveniently be had, this is a good substitute.

Besides the tests for impurities in water, as heretofore enumerated, by distillation, filtering, evaporating, treating with soap, silver nitrate and with alum, the following may be employed: If blue litmus paper is reddened when moistened

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GOLDIE — KATHERINE JAMIESON

with water, the water is acid, and if reddened litmus paper is changed to blue when placed in water, it indicates that the water is alkaline. Lime-water mixed with pure water remains transparent, but if a milkiness ensues, carbonic acid is present. Oxalate of ammonia occasions a white precipitate if the water tested contains carbonate or sulphate of lime. Phosphate of soda and ammonia added to water which contains magnesia will produce a white precipitate. Sulphureted hydrogen and hydrosulphurets give a brown or black precipitate in water containing iron or lead. To test for organic matter, add a little pink potassium permanganate solution and a few drops of sulphuric acid to the water, and if organic matter is present the color will slowly disappear. If no organic impurities be present, the color will be permanent.

Dissolved air causes frothiness of solution and air-bells on plates and films and impairs the keeping-properties of developing-solutions. Dissolved carbonic acid gas tends to the injury of prints in the washing-stages, also causing precipitation of carbonate of lime when solutions of ammonia or caustic alkali are used. Lime salts cause white milkiness or precipitate with oxalates, phosphates and carbonates. Salt gives milkiness with silver, lead and mercurous salts. Organic matter, which may or may not color the water, renders it unsuitable for toning-baths containing gold or platinum salts. Earthen matter will stain printing-papers, etc. Gelatine is particularly susceptible to stain, and soaking plates and paper in water for a long period is a bad practice.

Water is one of the most valuable substances used in photography and, by exercising care in this particular, many of the vexatious occurrences and difficulties met with in our every-day chemical manipulations can be avoided. Prevention is better than cure, and care in this particular is a sure preventive.

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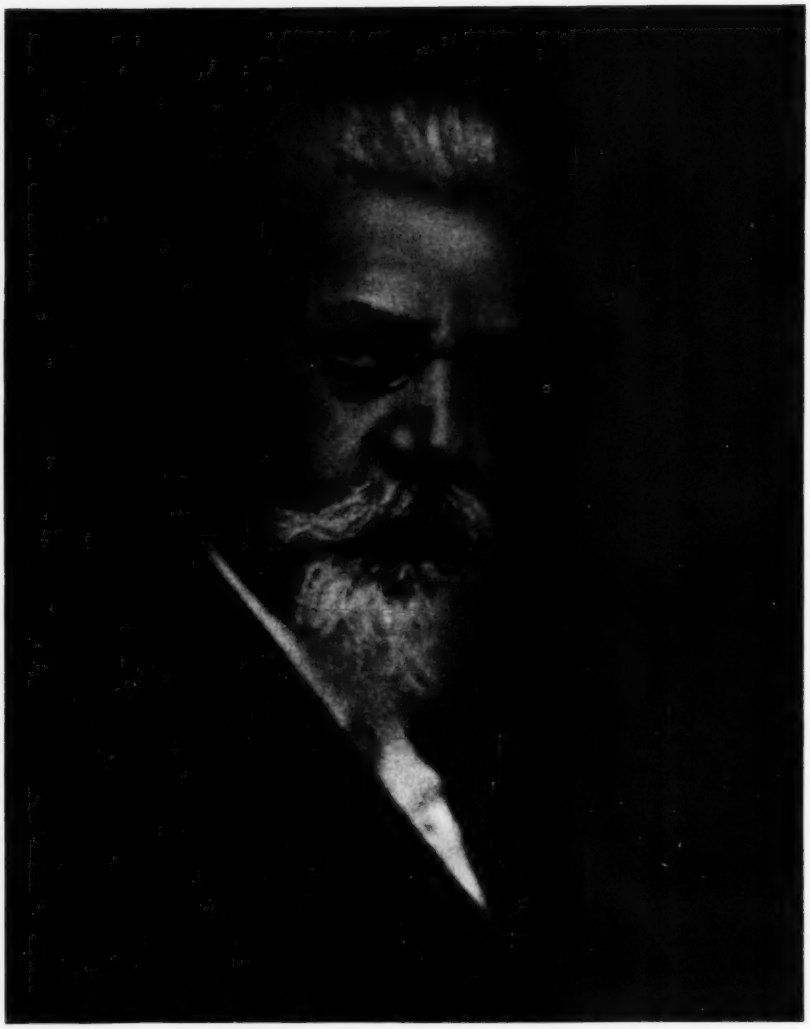

PORTRAIT
JEANETTE BAHLMAN
WOMEN'S FEDERATION OF THE P. A. OF A.

JOY — WOMEN'S FEDERATION OF THE P. A. OF A. — BELLE JOHNSON

One Developer for Plates, Films and Papers

PHIL M. RILEY

TWO friends of mine, lucky dogs, recently started for Florida by motor-boat, going from New York by the inside route, consisting of canals, bays, sounds and other protected waterways. They plan to cruise down around the Florida keys and along the Gulf coast to New Orleans. It is a free-lance, literary venture which, it is thought, will yield many practical cruising-experiences and some interesting travel-data, all of which will be illustrated by the camera-man of the party. He hopes also to photograph many interesting old houses, gardens and other picturesque objects in the many cities of the South through which they will pass.

When the entire outfit of two persons, including the necessities of life, work and play for three months must be stored aboard a 25-foot cruising motor-boat, space is at a premium. The photographic outfit for a varied amount of work was necessarily large, and included two cameras, several lenses, a goodly supply of plates and film-packs, sun-printing and gaslight papers, and a comprehensive assortment of chemicals. All developing and printing is to be done on board. As I was asked to suggest ways to reduce the long list, the first thing that occurred to me was the provision of a separate developer for plates, film-packs and gaslight papers — the worker's favorite agent in each instance.

"Why not adopt a universal developer?" I asked. "You can get one agent that will develop any of these three emulsions and effect a great economy of space."

"I'd be glad to do so," my friend replied, "if I thought that one developer would give me as satisfactory results as my three favorites. I've seen universal developers advertised, but my confidence never seemed to be inspired. Without ever trying them in their several capacities, I always felt that they would not make good. I suppose that was an injustice to the firms which advertised them."

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"Yes, it was," I had to admit. "Take Rytol, for instance, it makes good every claim for it, and a tabloid chemical is, of course, the most compact possible form. For general adaptability it has no superior. Why, only last week I was even using it as a substitute for Dianol to develop Autochromes."

"I'd thought of taking that," my friend said, "but it happens that I've never used it except for paper, and I won't have time to try it for negatives before I start. Success means so much to me in this work that I thought it wiser to use the chemicals I understand."

"You're right there," I agreed. "Now, let me see. Have you used Duratol, Rodinal, Edinol, Dianol, Adurol or Metol-Hydroquinone?"

"I know something about every one of them, and what I know is good; but I never tried any one of them in its capacity as a universal developer. I've always wanted to try Ortol, too, but never got around to it."

That put an idea into my head. I knew that I had two bottles of Ortol stock-solutions at home and a lot of work that needed to be done.

"Is there anything to prevent you from taking dinner with me to-night?" I asked.

"Why, no, I'll be glad to accept," my friend replied.

"Good. I'll give you an Ortol demonstration, show you how it works, and let you try it yourself on some of my work. It's a favorite of mine, although as a special developer or an all-round agent it is not at all superior to Duratol, for instance, which has an army of enthusiastic devotees."

After dinner we excused ourselves and retired to my darkroom, which is an extra bathroom remodeled, and so gives me plenty of running water, hot and cold.

"Ortol is sort of an old-timer now, isn't it?" my friend began.

"Yes," I explained, "a good many 'ols' have been brought out since Ortol first appeared on the market. It isn't advertised very much these days, and so the younger generation doesn't know it as well as it deserves, I'm sorry to say; but all the big supply-stores carry it, and many of their older customers will use nothing else. It is so much like their first love, pyro, in its action, that they were easily converted, and in actual practice came to appreciate highly its wider range of usefulness."

"If it has a yellowing influence like pyro, it's not suited to paper or lantern-slides."

"That brings us to the very heart of the matter," I replied. "It is a developer that acts like pyro, and its silver image is warm black, but there is no yellow staining of the film. Look at this," I continued, holding a negative before the electric light which I use for printing. "A lantern-slide like that wouldn't absorb much light, would it?"

"Splendid," said my friend.

"Here is the bottle of salt itself and the stock-solution," I went on. "You see it's a coarse, grayish-white crystalline powder, very soluble in water, and in its dry state, when guarded from light, it keeps unchanging, hence the orange-colored bottle. This solution, you see, is colorless. It was made up with metabisulphite and keeps well. This bottle of it has been standing here for several months. It's a moderately-rapid developer free from fog, and is sufficiently sensitive to bromide as a restrainer to render it easily variable within about the same wide limits as pyro."

"Like pyro it has to be thrown away after use," I suppose.

"On the contrary, when kept in full, closed bottles the used developer can be kept for a long time and can be used repeatedly. Not until the developer becomes brown is it useless. Here's my formula in two solutions. See, it reads:

A

Water, cold	20 ounces
Potassium metabisulphite	70 grains
Ortol	140 grains

B

Water	20 ounces
Sodium carbonate, anhydrous	1¼ ounces
Sodium sulphite, anhydrous	1¾ ounces
Potassium bromide	10-20 grains

I use it at a temperature of 65 degrees. Lower temperature retards its action as with pyro, and if you cannot maintain this standard temperature, you'd better omit the bromide."

"If you don't mind, I'll copy that formula while you make the solution ready for use," said my friend.

"Go ahead," I answered. "Ordinarily I use equal parts of A and B for tray-development, or for increased softness and slower development I take one part of each and add one part of water. The factor is 10 if you care to work that way."

"It's well to know it, anyway."

"Watch this plate, now," I announced, switching off the white light and on the ruby, after which I immersed an exposed plate in the developer, flowing the solution across the whole plate with one quick motion of the hands. "Twenty-five seconds elapsed," I finally announced, "and you can just begin to see the image. That exposure must have been about

THE LITTLE LADY — MISS REINEKE

WOMEN'S FEDERATION OF THE P. A. OF A.

right, because complete development requires usually four to five minutes. From now on, development of detail and density will proceed together and gradually, as with pyro."

While we were waiting for the time of complete development, I explained that by varying the composition of the working-solution, results can be controlled with any brand of plate or film and any duration of exposure within workable limits. More of A and less of B gives harder negatives, whereas less of A and more of B gives softer negatives. Ortol is also more sensitive to the addition of a restrainer or accelerator than the faster developers. For that reason known overexposures are well controlled by the addition of a few drops of potassium bromide, ten-percent solution, and underexposures are made the most of by the addition of a few drops of caustic potash, ten-percent solution.

"That's great!" exclaimed my friend when I raised the negative out of a tank of acid fix-

ing-bath fifteen minutes later. "Do you happen to have a tank-formula as good as your tray-formula?"

"Copy this while I make it up," was my answer. While I weighed out the salts and dissolved them, this is what he copied:

Water	48 ounces
Potassium metabisulphite	12 grains
Ortol	24 grains
Sodium sulphite, anhydrous	78 grains
Sodium carbonate, anhydrous	78 grains

"That just fills my five-inch Kodak tank," I said, as he was finishing, "and let me give you a tip. In 4 x 5 size the tank will take the roll-film spool and apron, the film-pack cage and the plate-cage; one tank serves for them all."

"Well, that eliminates two tanks from my list, and saves a lot of room," said my friend, with enthusiasm.

Putting a spool of roll-film through the transfer-box as rapidly as I could, I got development started, telling him that at 65 degrees the total time would be about thirty minutes, but that film-packs, because of the glycerine-coating to make them lie flat, would require about ten minutes longer. A developer never really begins its work so quickly on a pack-film as a roll-film; a certain time is required to penetrate the surface-coating, which is necessary because a pack-film is not kept flat by tension like a roll-film.

"And now for the gaslight work," urged my companion. I could see that he had become genuinely interested.

"I use my tray-formula for plates when developing paper," I explained, "adding three to five parts of water — always five for bromide paper and sometimes more. Five parts is always enough for gaslight brands. Always use a test-strip to make sure that there will be no darkening of an unexposed paper for at least one minute. If necessary, add more potassium bromide, ten-percent solution, drop by drop to prevent it. The exact quantity, of course, varies with the quality of the water used."

Selecting some negatives, we made prints from them on three different popular brands of gaslight paper, and then enlarged one to 8 x 10 in a fixed-focus enlarger. All were developed successively in the same tray and in each instance the result was a good, pure black, slightly warm, but not brownish nor accompanied by any yellowing of the paper.

"They're as good as I ever saw," my friend announced after looking them over critically. "Your thirty minutes is up," he then reminded me, looking at his watch.

We opened the tank, which I had reversed end for end three times during the half hour, rinsed the film and put it in the fixing-bath. In pouring the developer out of the tank we found that it was only very slightly discolored and good for further use. In fifteen minutes I pulled out the strip of film, gave one end to my companion and we examined it carefully before the opal glass of my printing light.

"You've proved your case," he said, turning to me with a smile. "They're beautiful, not only to look at, but they have good gradation and plenty of shadow-detail. They can't help but be good printers."

In two hours I had made a new Ortol convert. I can't swear that he took it on his trip, but I think he did. If so, he has one of the best all-around developers on the market; one that is simple, dependable, easily controlled and varied to meet different requirements, acts in a convenient time, and is economical because each solution can be used several times. It is a developer that can be employed for lantern-slides with the utmost success, giving a black image that is beautiful to look at on the screen. The regular tray-formula is well suited to this purpose.

Ortol is also a developer that combines well with another reducer, thereby yielding the good qualities of both. Perhaps the most common instance of this is Ortol-Hydro, which is recommended by the manufacturers of several gaslight papers to those who object to metol. A convenient formula is as follows:

Water	20 ounces
Sodium sulphite, anhydrous	1½ ounces
Ortol	44 grains
Hydroquinone	130 grains
Potassium iodide	100 grains
Potassium bromide	7 grains
Sodium carbonate, anhydrous	2½ ounces

For use, take one part of stock-solution and four parts water, keeping the temperature at 65 degrees. The concentrated stock-solution keeps indefinitely without discoloring in full bottles well stoppered.

[A series of formulæ for other universal developers will appear monthly in The Crucible. A tested formula for Duratol will be found on page 149 of this issue. — *Ed.*]

A GOOD picture is rarely the result of chance. Artistic instinct and a knowledge of art-principles and technique are absolute essentials to a high standard in picture-making.

Louis Fleckenstein.

The Development of Film-Packs

E. L. C. MORSE

FOR lightness, portability and convenience of operation the film-pack, in the opinion of many workers, is superior to the roll-film. Its price is about twice that of the glass plate and about the same as that of the roll-film.

Its disadvantages are: high price, tendency to mysterious and unaccountable streaks of light, resembling Halley's comet, and, finally, difficulty in development.

Under present conditions probably no remedy can be expected for the high price, the contrivance being protected by patents in the United States. The Lumière (French) and the Goerz (German) concerns put forth film-packs which are offered for sale in the British market, but not in America, where one must use the Premo film-pack or adopt roll-films or glass plates.

The light-streaks are said to be due to the generation of electricity on the emulsion under certain atmospheric conditions — a defect that can often be overcome by care and deliberation in pulling the tabs slowly.

The chief difficulty in handling the films during development is due to their slippery character, resembling a lot of eels in water. To be sure, there is a tank contrived for this purpose, but the operation has the disadvantages of most mechanical operations when applied to the pictorial arts. At best it is a sort of Procrustes' bed.

Procrustes, it may be remembered, in ancient times, had a bed in which he accommodated travelers who sought a night's lodging. The bed was adapted to the ordinary-sized man, but when a man of unusual size came along, Procrustes proceeded to adapt the man to the bed. If the man were too short, he was made to fit the bed by an ingenious set of ropes and pulleys which forcibly stretched the traveler until he fitted the bed. Should the poor man happen, on the contrary, to be too long, any surplus anatomy was chopped off until the man fitted the bed. The bed suited the average man very nicely, but the contrivance was tough on the unusual and exceptional man.

Tank-development does very well in the majority of cases, but it does not work satisfactorily in some cases; it strikes a fair average only under average conditions. Certain subsequent processes and effects — by no means rare — require a contrasty negative, and others require a soft negative. Duration of development determines contrast. Manifestly the time of development must vary to achieve different effects in negatives. This is impossible in the tank-method.

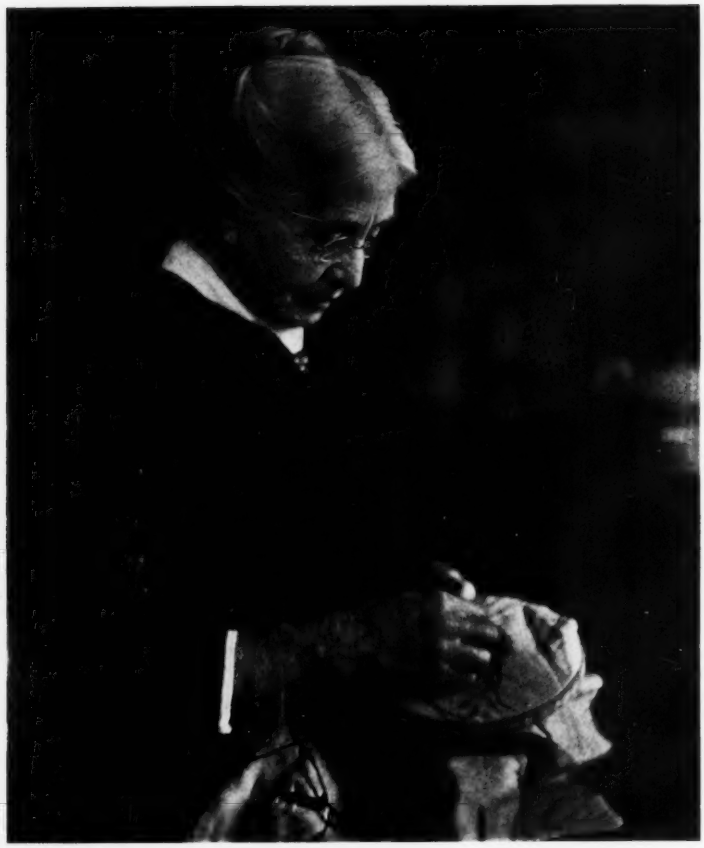
On the other hand, the worker may be in a position where it is a case of either overexposure or underexposure, or else no picture at all. Knowing this, the negative may be saved by either a soak previously in weak bromide or by heating the developer, as the case may require. However, if the over- or underexposure has been made unconsciously, the negative may be saved by variation in the time of development and subsequent reduction or intensification as the case may be. Again, the careful worker will sometimes deliberately overexpose a landscape in which the contrasts are excessive, and by the same token underexpose to meet opposite conditions. To achieve a pictorial result, he will underdevelop in the first case and overdevelop in the second. All this is impossible in the tank-system.

How, then, can an amateur who has been off on a vacation, taking all sorts of pictures in all sorts of light and under all sorts of weather-conditions, develop a dozen slippery films with the same ease, certainty and care that plates are capable of?

It will not do to handle the wet films. They may slip out of the hands and fall to the floor, with results disastrous to pictorial effects. Nor, on the other hand, will it do to stick the fingernails into the emulsion in the hope to get a firmer hold. The films, too, have a reprehensible habit of sliding about the tray into places photographically undesirable. They seem to be gregarious by nature and are fond of bunching up in one corner, and it is a trick worthy of Keller in his best days to pick up a film, place it and make it stay in any particular place in the tray, or to take it out of the tray before the rest, without injury to the surface.

The remedy, however, is extremely simple — one of those very obvious things that occur to us only after trying to do without it for a long time.

Go to the stationer's and buy a dozen of those small clips that are used in offices for holding papers together, preferably those with small teeth. They cost only a few cents apiece. Use the tabs of the film-pack for a memorandum of every exposure made. In the darkroom have a tray large enough to hold six films conveniently. As you unload the pack, insert each film in the jaws of a clip and arrange the films in



WOMEN'S FEDERATION
OF THE P. A. OF A.

" At the close of the day,
When the hamlet is still."

MARY CARNELL

a certain order so that you can identify each film from your memorandum. Lay the films, each with its accompanying clip, in the tray in a regular order and pour on the developer. The weight of the clip will keep the film in one place and allow you to handle the films as you like without touching them with the hand. Consulting your memorandum, you can proceed intelligently, varying the time of development to suit conditions or effects desired. But the point to bear in mind is that the films are to be handled by means of the clips and never by the hand. Thus used, they are perhaps more easily handled than plates.

The films are developed, and the next thing is to fix them in hypo, and not let them bunch up together or injure their delicate surfaces by striking any other rough surface.

The remedy in this case is simple. Get a piece of stout wire — telegraph wire, for example. Run this wire through the little holes in the top of the clips and let the film on its clip hang in a hypo-bath, each clip being far enough from its fellow to prevent touching.

A convenient way to wash pack-films is to half-fill a bath-tub with water and lay the ends of the wire with its clips, described above, on blocks of wood, letting the whole thing float in the tub.

When sufficiently washed, the films, still on the wire as above, after swabbing with a dab of cotton, may be suspended by means of strings attached to a corner of the room by thumb-tacks or push-pins.

When bone dry, the films may be removed from the clips and will be found to be perfect

WOMEN'S FEDERATION
OF THE P. A. OF A.

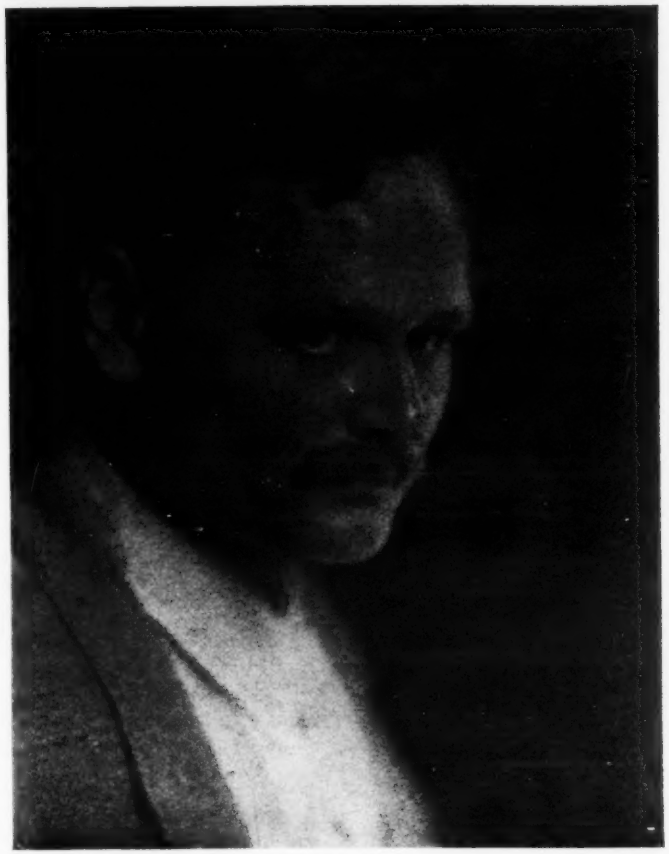
DAY-DREAMS KATHERINE BINGHAM

except where the jaws of the clip have impinged — a space about equal to the rebate. There should be no scratches, no finger-marks, no nail-marks, if directions are followed as given above. Any effect that can be accomplished on a plate can be accomplished on a pack-film thus handled.

The same process might be applied to roll-films except for the fact that roll-films *will curl* in development (*pace* all advertisements to the contrary notwithstanding) and cutting up a roll-film in the darkroom occasionally lends itself to disappointments and objurgations.

[It should be emphasized that the foregoing criticism of tank-development applies only when it is desired to vary normal results for purposes of pictorial effect, or when incorrect exposures are to be made the most of. Exposure is the secret of straight photography, and with correct exposure normal development will take care of itself. In the tank it matters not whether an exposure be one second or one minute. So long as each be correct, they will both develop in the same solution in the same length of time. The ways of pictorial photography, however, are many and devious, and, as Mr. Morse states, mechanical methods are not conducive to individuality of treatment. — *Ed.*]

ART is a grasped generalization of the truths of nature, freed of all coarse, crude and degrading accidents and details. The consummate artist, observing the principles of law, does everything easily; while the empiric, striving at facts, does everything laboriously. — *Alger.*



HEAD OF A MAN — CLARA ESTELLA SIPPRELL

ANNIE — MAY L. SMITH

WOMEN'S FEDERATION OF THE P. A. OF A.

The Flashlight-Season

TO most photographers flashlight-photography is a bugbear. Some shirk it altogether; some place the work with a specialist; others do the best they can without proper knowledge, and a few understand the principles involved and make a success nearly every time. The unfortunate fact is that little or no care or forethought is exercised in preparing for this special and really difficult class of work. An order is booked, and an hour or two before starting, the flashlamp is dug out of the corner. Possibly a new tin of flashpowder of a different brand from that used last time is procured, or it may be decided to chance it with the remains of last year's supply, and the operator sets out with the feeling that he will be very glad when the job is done. To the habitually-careful worker this picture may seem to be overdrawn; but it is true to nature in most cases, particularly at this time of year when the demand for flashlights of dinners and meetings begins. Flashlight-photography is feverish work at its best, and the apparatus and materials used should be as perfect as can be procured. Nor is that all that is necessary; the photographer must thoroughly master the method of using them, and this can be done only by careful practice and rehearsal under what may be considered average conditions. Most operators have very vague ideas as to the quantity of powder necessary for a large group or interior, and are just as likely to use too much as too little, while the position of the lamp is rarely quite correct, often giving flatness in the faces and a dazzled appearance to the eyes. It is a good plan to do a little speculative work, say, in a local gymnasium or even in the interior of a large workshop, to get things into good running order. If the first attempts give good results they cover expenses; if not, there has been an opportunity to find out weak points without the loss of reputation and a good order.

The principal points which have to be considered are, firstly, the maximum aperture of lens at which sufficient depth can be obtained; secondly, the position of the lamp, particularly as regards height; and, thirdly, the quantity of powder necessary properly to illuminate the most distant figures in the group, the distance between the lamp and such figures being an important factor. Regarding the first of these it may be pointed out that with modern flat-field lenses, which define sharply right across the plate at full aperture, a much larger stop may be used than is possible with a rectilinear. As it is usually necessary to have the camera in a somewhat elevated position, depth can be obtained by the use of the swing-back and, as the lens is pointed downwards, the same swinging which does this corrects the diverging perpendiculars. The next point, viz., the placing of the lamp, is all important. The lamp is frequently placed too low and too nearly over the lens. It should be at least ten feet from the floor for a large group and well to one side of the camera. Even then some of the faces will receive a full front-light, but the center ones and those on the distant side should have decent modeling. Great care, of course, must be taken to prevent any direct rays from the flash reaching the lens. It must be remembered that when using a flashlamp we are dealing with a near source of light, and that therefore the falling-off in illuminating-power is very rapid. If the nearest point in the picture is twenty feet from the camera and the most distant forty feet, the latter is receiving only about one-fourth the exposure of the former. This may be overcome to a certain extent by fixing a mirror behind the flash so as to reflect a beam of light which misses the nearer figures and strikes the group about halfway between the front and back planes. The third point — amount of powder — can be settled only by experiment; but in the case of large work the operator must learn to think in ounces instead of the grains or drams which would suffice for single figures. It is impossible to be too cautious in the handling of explosive flash-mixtures, and it is a wise precaution to put up only enough for one exposure in each box or bottle. Some serious accidents have occurred through sparks reaching a tin containing a pound or so of powder. A closed lamp must never be used with explosive compounds, such instruments being intended for pure magnesium only. Flashpowders must always be burned upon an open tray.

A branch of flashlight-work which has not received the attention it deserves is the taking of single portraits and small groups in private houses. With a properly-screened lamp perfectly good pictures, with no suggestion of artificial lighting, may be obtained. Here, again, we must remember to keep the lamp high enough. If the light be five feet away from the head of the sitter it should also be five feet above it and as much to one side as may be necessary to give the desired lighting.

British Journal of Photography.

XUM

A WINTER LANDSCAPE — F. W. HILL

B. Y. M. C. U. CAMERA CLUB

"THE BREAKING WAVES DASH HIGH" F. W. HILL

B. Y. M. C. U. CAMERA CLUB

B. Y. M. C. U. Camera Club

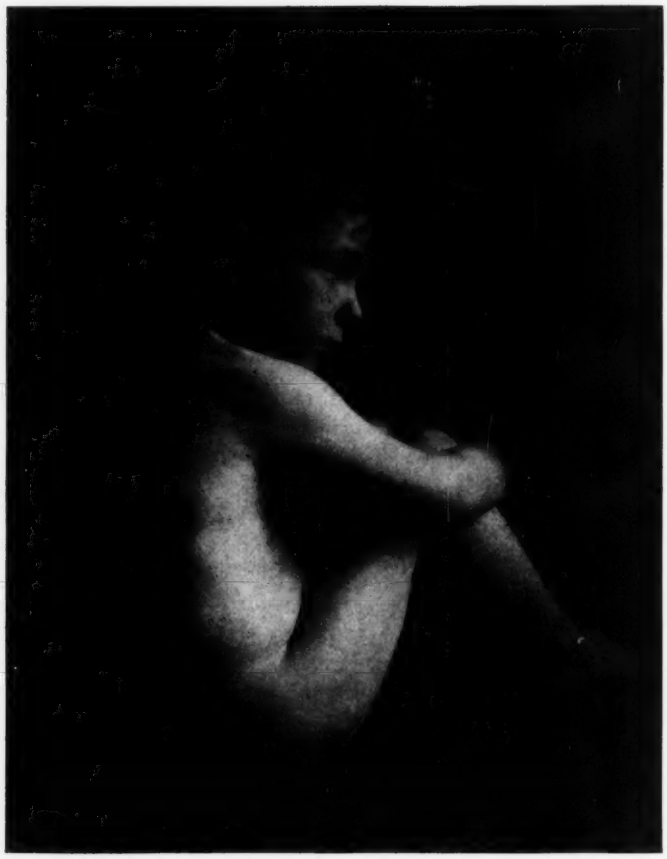
F. W. HILL

IN the fall of 1907 eighteen members of the Boston Young Men's Christian Union, who were interested in photography, got together and petitioned the president and director of the Union to allow them to form a camera club within the Union, and to set aside and furnish rooms for their use. This the Union agreed to do, and appropriated $325.00 to furnish the rooms, on condition that the camera-users furnish an equal amount.

Under these conditions the Union Camera Club was organized in April, 1908, with eighteen charter members. Stephen E. Woodbury was elected president, and the Club started to raise funds for its share in furnishing the rooms. This was accomplished so that the rooms were formally dedicated on July 13, 1909, and a real camera club came into existence.

The rooms are situated on the third floor of the Union Building, 48 Boylston Street, Boston, and are well adapted to the needs of the Club. They consist of a large assembly-room, three darkrooms, two printing-rooms, enlarging-room and work-room, and are fully equipped with all necessary apparatus. Individual lockers are also provided for each member.

In 1910 President Woodbury, having served two terms, followed our national example (T. R. excepted) and declined a third. As no other member seemed inclined to accept the position, the Club was in a somewhat unorganized state throughout the summer of 1910. In September, Mr. F. W. Hill, a comparatively new member,



STUDY M. L. VINCENT

was finally elected for the remainder of the year, and began to revive the Club by making a social center of it for the members, as well as a photographic work-shop. This proved so successful that, when President Hill completed his second term in 1912, the membership had increased to over forty members, and the monthly meetings were attended by from fifty to seventy-five per cent of the members.

In 1912 Dr. Harvey D. Hutchins was elected president, and has continued the good work, so that the membership has now increased to over fifty active members. In the meantime, the equipment of the Club has been steadily increased. There is now a complete 8 x 10 studio-outfit, with artificial light, so that members can make portraits day or night. There is also an excellent projecting-lantern with a 2,000 candlepower arc-light for the lantern-slide enthusiasts. The work of the members has also risen steadily, until now their Annual Exhibition is one of the photographic events in Boston, and exhibits by club-members will be found in all the leading salons and exhibitions in the country. In closing, just a few words as to the advantage of belonging to a camera club seem to be order. First, we have the advice and experience of our fellow-members. But greatest of all to the real enthusiast is the spirit of competition — always trying to do something better than the other fellow. One member exhibits a fine picture — we want to make one a little better. And so it goes, ever improving and trying to do the best we can. The result cannot but be beneficial. Personally, I have used a camera for over twenty years; but I

"WHO ARE YOU?" DR. H. D. HUTCHINS

B. Y. M. C. U. CAMERA CLUB

have learned more about making real pictures in the four years that I have belonged to the Club than in the other sixteen. Moral: If you do not belong to a camera club, join one.

Hunting with a Camera

WHEN you hunt with a gun you incur big dangers, not only for yourself, but for other people. "To shoot a bird is to lose it," said Henry Thoreau. A dead bird is not a bird at all. It is only the remnant or mutilated remains of what was once a living thing.

To take a picture of a bird and preserve the picture is a great achievement for a child or a grown-up, and when we can change the shooting habit into a camera habit, we have made an immense stride to the front. The camera-habit endears us to life, preserves sanity, and makes for health and happiness.— *Elbert Hubbard.*

A KISS IN HONOR, NO ONE CAN DENY — KÄTE HECHT

My Animals and My Camera

KÄTE HECHT

FROM early childhood I have always loved animals; without horses, dogs, tame birds and fearless deer we should find life "tedious and time-robbing," as Schopenhauer says. It was natural, therefore, that when I took up photography I should seek my photographic subjects among the animals, and through the animals I learned to love my camera, which I took up at first only as a pastime. Yes, I learned to love and to appreciate it, for it permitted me to secure in pictures many little episodes which I had discovered and observed out in the garden and in the forest. When photographed, my animals seemed to be tangible before my eyes — they were no longer mere souvenir-photographs, which I must awaken to life; they live before my very eyes with all their intimate charm, just as in the early morning or late evening when I had stealthily heard and watched them. And even to-day, after thirteen years have passed since my first snapshots were made, even to-day the animals are to me the only worthy subjects for my camera. Since childhood they have remained my personal friends, with whom I have lived on a friendly footing, and later becoming the subjects of my study and observation — a mental process which affords a deep insight into the soul of the animal and often arouses astonishing admiration of the thousand indications of instinct and intelligence and of personal individuality. It is this individuality of each detail which manifests itself in my "sittings," *i.e.*, in those tests of patience which are frequently necessary to the development of my pictures. For I am not indebted to chance alone for charming genre-pictures, but principally to the infinite patience with which one leads back these animals, again and again, to the same spot in order to fix to the plate the pictures which have been conceived in the mind. Many days — and of these, many hours — are needed in order to reach the goal. And yet, one must not tire the animal, lest, through an impatient word or gesture, one undo the work of many days; nor yet, through lack of preparedness, permit to go by unutilized the last moments in which expression and movement harmonize, as, for instance,

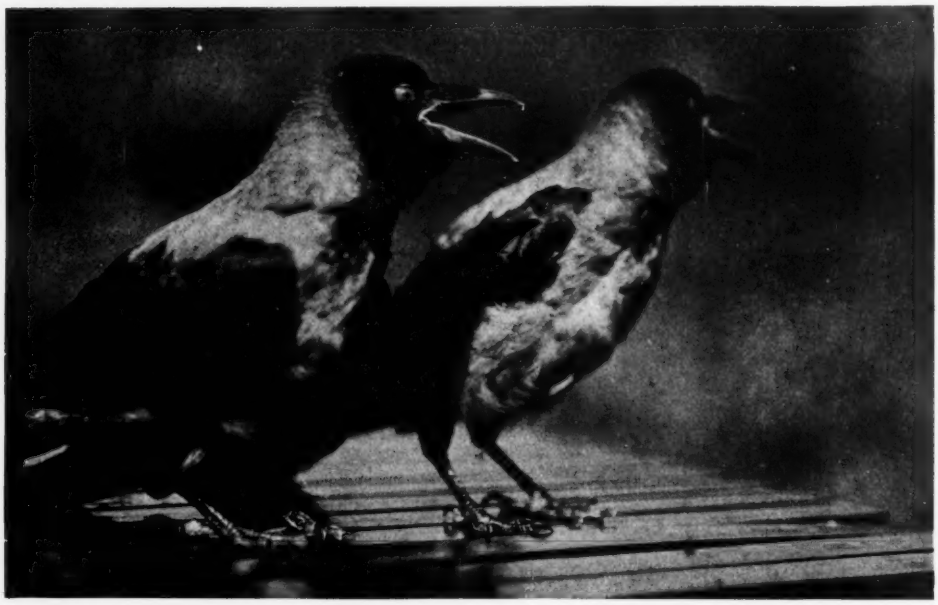
AN AMPHIBIOUS TRIO — KÄTE HECHT

in the picture, "Ein Wichtiges Gespräch." As I have already mentioned, all animals are not equally well suited to my purpose. This one is animated and responsive; that one is stupid or indifferent to the most emphatic admonitions or arguments. Such troublesome sitters are replaced by substitutes. Out of four crows, only two proved to be wholly camera-worthy. The other two, by sheer stubbornness and disagreeable behavior, always upset my best-laid plans. Ordinarily, crows are particularly grateful subjects for the camera in that, through intelligent and animated behavior, drollness and impudence of manner provide most comical situations. "A Kiss in Honor, No One Can Deny," is the title I have given to a laughable pose in which the crow daintily and gravely bestows a kiss upon the pup's cold nose. It was this same crow which, with starting eyes and open beak, gazed horror-struck upon a toad seen for the first time. As I have already said, the other crows gave no expression to their sensations on such encounters.

Usually grateful subjects are mice, and in every pose they are dainty and graceful, and on account of their lively motions offer fresh material for new pictures. I am indebted to them for suggesting several of my most successful genre-pictures.

And now a few words regarding my technical equipment. I do my photographic work exclusively with mirror reflex-cameras. To see the picture up to the last moment before exposure upon the ground-glass, is an advantage which no other camera, however handy and light, possesses. Equally indispensable are the relatively great focal lengths of 18 and 25 cm. (about 7 and 10 inches) in connection with my plate-sizes, 9 x 12 and 12 x 16½ cm. (3½ x 4¾ and 4¾ x 6½ inches), in order to obtain a pictorial size of the object to be secured upon the plate — in

EIN WICHTIGES GESPRÄCH — KÄTE HECHT



YOUNG CROWS KÄTE HECHT

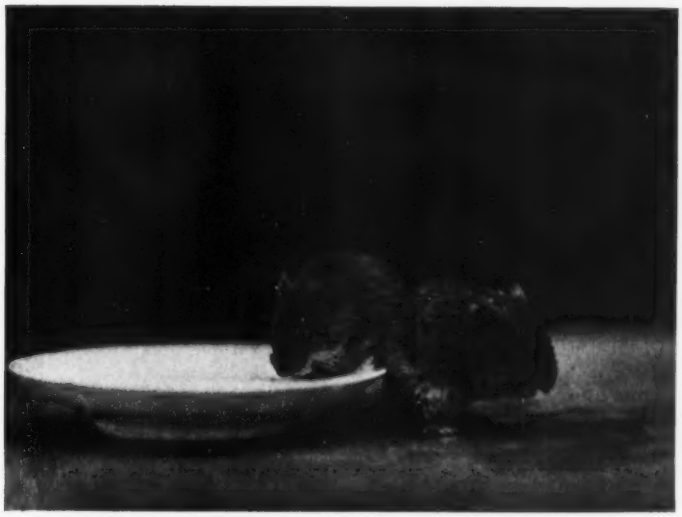
spite of the great difficulty in focusing during the constantly changing positions of the animals. My relative apertures of F/6.8, and F/5.5 are not always adequate during unfavorable light-conditions. F/4.5, with its greatest speed, would surely have prevented the loss of many a valuable picture. I prefer exclusively slow and soft-working developers, such as katechin and glycin. The delicate delineation of fur, skin and plumage — often the characteristic feature of the entire picture — should never be lost. That highly-sensitive plate-material is an essential condition, need not be particularly mentioned. But all good optical equipments, all excellent technical expedients, do not conjure a picture upon the plate, although what they produce is, in the best sense of the word, a pictorial effect.

The basic requirement for work like mine is the love of animals and an intelligent and sympathetic feeling for the creature's soul and a self-absorption in the manifold character of each particular feature. This will enable one to approach the task controlled by a single idea and equipped with the necessary degree of patience. Even when many blanks are drawn in the lottery of fortune, there are many prizes which enlarge and deepen the pleasure to create. As Mephistopheles says in Goethe's "Faust," "The effort is small, the sport is great."

Reducing Contrast by Toning

A NEGATIVE made some time ago of a rather difficult subject proved on development to be of such intolerable harshness as to be quite useless; the shadow-masses being practically clear glass, the writer thought it hopeless to apply any after-treatment. While blue-toning some bromide prints the idea presented itself that this process applied to negatives would render the highlights much more pervious to the actinic rays, and so the negative was toned to a brilliant blue, when it yielded a print of delightful quality.

Any of the formulæ for the blue-toning of bromide prints may be used, and will be found to alter to a remarkable degree the printing-quality of a negative which is of a robust nature, and the prints appear to suggest color-values more faithfully, and to convey a better sensation of atmosphere. The silver deposit becomes more actinic by degrees, and the action may be stopped at any time, half an hour's washing completing the operation. If, after a print has been taken, still further reduction of contrast is desired, the toning can be resumed; only in cases of extreme harshness will it have to be carried to the stage of brilliant blue. Printing should be done on a development paper, not on P. O. P. — *David Ireland in The Amateur Photographer.*



A STOLEN MEAL
ASTONISHMENT
KÄTE HECHT

EDITORIAL

Exemplary Advertising-Methods

THE art of advertising as a means to obtain patronage, whether it be in the mercantile field or in professional activity, has been practised since the beginning of civilization. Advertising or publicity exists in various forms, and the effectiveness of an advertisement depends on the ingenuity or resourcefulness of its originator. Photographic advertising has usually consisted only of the conventional showcase placed at the street-entrance of the studio, and, although it is still regarded as the most potent means to procure business, the enterprising photographer also employs other methods, such as advertising in newspapers and street-cars. But, as has already been stated in these pages, whatever form or method suits one photographer may prove unproductive to another. The class of people to be reached, the style of work of the studio, or the funds available for the purpose usually determine the method of advertising. When the photographer desires to acquaint a cultivated class of persons with the superior quality of his work by means of a printed folder, he cannot hope to create a favorable impression unless the communication itself is executed in good taste. If the design and workmanship are not artistic, the effort to interest the recipient in the work of this particular studio will prove unavailing.

Although this kind of publicity-work used by a number of high-class studios in America is irreproachable in appearance, the latest expedient adopted by the Dührkoops, of Berlin, represents, perhaps, the best that has yet been achieved in photographic advertising. It is just a "portrait-almanach," for the year 1914, in the form of a brochure, five by nine inches and printed on India-tint, dull-finish coated paper. The front-cover is an extremely simple but effective design, including a halftone reproduction of a typical Dührkoop portrait — the profile of a handsome woman. The contents, composed of thirty-two pages, has been arranged with discriminating judgment. On the title-page, at the top, appears only the designation, Dührkoop-Bildnisse (Dührkoop-Portraits). The next corresponding page is devoted to a list of honors won by the Dührkoops, which include about fifty decorations and medals bestowed by royalty, universities, expositions and societies. The next two pages are given up to a statement regarding the character and variety of the work done by the firm. Then follows the "almanach" proper, one month occupying two pages facing each other, the upper half of each being occupied by a characteristic Dührkoop portrait taken either in the studio or in the open, and printed in warm-black ink. The concluding two pages contain a scale of prices, according to which, for instance, fifty Marks ($12.00) is charged for one sitting and two completed prints, size of print about eight by ten inches; each additional print, $3.60. Conditions and suggestions with reference to satisfactory service conclude this section of an exemplary and useful publication. The advertising-value of so attractive and useful an expedient must be apparent to every photographer of business-ability. The idea should be adopted not only by makers of portraits, but by other specialists in the photographic field. The keynote of all advertising should be simplicity, directness and good taste. In developing an idea, the advertiser can often obtain valuable aid from an amateur pictorialist, unless he prefers to consult a professional painter.

Abbreviated Business-Terms

SOME of our friends, who include in their reading German photographic publications, have requested us to explain the meaning of the letters, "G. M. B. H.," which appear after the names of certain German business-firms. They are an abbreviation of the term, Geschäft Mit Beschränkter Haft or, in English, "business of limited liability," which is usually shortened to "limited," as used by English and American business-firms.

The four letters, "D. R. G. M.," as used in connection with advertisements of manufactured articles, which appear in German papers, are an abbreviation of Deutsches Reichs Gebrauchs Muster (German Imperial Utility Sample). This is different from, "Deutsches Reichs Patent," inasmuch as the former is simply a protection from imitation, which does not offer as much protection as a patent, and its life is only about two or three years. This protection is obtained much more easily on any device than a patent, and is often employed in preference to a patent, unless the device should be one of considerable importance.

XUM

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition, 383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.
Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request. Enclose return-postage in this letter.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards — Christmas Cards

First Prize: Mrs. C. B. Fletcher.
Second Prize: Erwin Marty.
Third Prize: Anson M. Titus.
Honorable Mention: H. W. Mansfield, Alexander Murray.

Subjects for Competition

"Still Life." Closes February 28.
"Foreign Travel." Closes March 31.
"Flashlights." Closes April 30.
"Growing Flowers." Closes May 31.
"Telephoto-Work." Closes June 30.
"Landscapes." Closes July 31.
"Outdoor-Portraits." Closes August 31.
"Waterscapes." Closes September 30.
"Indoor-Portraits." Closes October 31.
"Decorative Applications." Closes November 30.
"My Home." Closes December 31.
"Winter-Scenes." Closes January 31.
"General." Closes February 28.

Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize ($10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Our Friends

JUST as you have consciously or unconsciously been benefited by participation in these monthly competitions, so your friends would also be spurred on to do better work and would be broadened in their appreciation of that which is best in photography — pictorial art. Tell them about these competitions, of the pleasure of rubbing elbows, so to speak, with their fellows, and of the satisfaction of winning a valuable prize strictly on the basis of relative merit. May we count upon you to "pass the word along"?

XUM

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Flashlights

Flashlight-Competition Closes April 30

ONCE more, as we "sing a song of seasons," we come to the month of slush and bluster, when, however great the charm of the translucent, water-soaked snow and the reflections on the ice and the spreading puddles of water, it takes a deal of enthusiasm, not to say heroism, to brave the sharp wind and the discomfort of soaked feet and bedraggled garments and fare afield to bring in the coveted portraits of Mother Nature in the month of March.

But the days are growing longer, the sun is mounting higher in the sky, and we can mitigate the tedium of waiting by doing interesting things with "bottled sunshine" indoors.

The manufacturers of photographic appliances have placed at our disposal all manner of up-to-date material in the way of "portable skylights," flash-sheets, cartridges of various sizes, non-explosive "ribbon" and flash-lamps of several different types, until surely every one should be able to find something to meet the exigencies of his particular surroundings.

Each variety has its strong adherents, who seem to feel that theirs is the one and only safe and satisfactory method to make pictures by means of the flashlight. The truth seems to be that any one of the many processes will give good results if properly used, the chief requisite being intelligence in the "man behind the gun." Whatever sort of appliance is chosen, the best way is to stick to that until its technique has been mastered and, if results are unsatisfactory, that the trouble is surely in the methods, not in the operator.

Of the most recent things put on the market for this purpose may be mentioned a "portable skylight," such as the Victor Studio Flash-Cabinet. This is admirably adapted to the making of flashlight-portraits, and for this class of work it would be difficult to find anything better.

In home-portraiture by daylight, it is often impossible to take the subject in the best setting because the illumination is either inadequate or comes from the wrong direction. Difficulties of this sort do not disturb the worker with the flashlight. He can select any background he desires, and when he has his arrangement and has his sitter posed satisfactorily, he is free to place his light where it will give the best results. Care, however, must be taken to keep the light from striking the lens, and if, to obtain the desired effect, the flash has to be so located that there is a possibility of its doing this, a lens-hood should be improvised to ensure immunity.

A simple but effective hood may be made from the dead-black paper that comes around dryplates or gaslight papers. Simply shape a piece like a funnel and fasten the small end about the lens with a rubber band. Be sure that the hood flares enough to prevent its cutting off any of the view. If the light is pretty well to the side, a screen may sometimes be used to shield the lens from the direct light, obviating the necessity of a hood.

The "portable skylight" is so constructed that it can be placed well above the sitter and fairly near, so requiring less powder for the same exposure. If, however, one has some mechanical skill and does not care to go to the expense of the patented article, a very good substitute may be made. Mr. C. M. Whitney describes such a contrivance in the *American Annual* for 1904.

For this he takes the bottom of an ordinary music-rack, substituting for the rack itself, a 7-foot ¼-inch iron rod. So arranged as to slide up and down on this rod is a smaller rod or heavy wire projecting some two feet on each side and having a hook on either end. From one end of this horizontal rod is hung a piece of white sheeting one yard square, fastened at the top to a three-foot rod. This acts as a reflector, while a double thickness of cheese-cloth, similarly arranged at the opposite end of the rod, serves to diffuse the light. A piece of sheet-iron about eight inches square is fastened to the upright rod in such a manner as to allow the height to be adjusted, and on this the flash is arranged. Mr. Whitney very wisely suggests the advisability of dampening the screen and reflector before using, so lessening the danger from sparks.

Where children or animals are the subjects to be taken, it is almost necessary to use an instantaneous flash; but if the subject is one allowing a longer exposure, an interior for instance, the Crown or Prosch hand flash-lamp are very satisfactory tools. They require the pure magnesium powder, which is non-explosive and gives a very strong light. The magnesium is ignited by blowing the magnesium powder through the flame of an alcohol lamp and any length exposure may be given. By attaching a long tube to the lamp it may be placed in the fireplace and used for very picturesque fire-light studies. The Nichols is a similar type of lamp for portraiture. It stands on a tripod and has an umbrella for reflection or diffusion.

Magnesium is also put on the market in the form of a "ribbon" and in that form is very simple to use. A given number of inches will always give the same exposure and for a short piece no apparatus is needed. A pair of pliers may be used to hold the ribbon and prevent burned fingers. If a long strip is needed, however, this method is hardly adequate and Mr. Zerbe, in the *American Annual* for 1912, describes a very ingenious "lantern" for this purpose:

Take a round tin can like one in which platinum paper is marketed. Cut two slits, one on each side of the seam, leaving about one-half inch at the top and bottom uncut. From the ends of these slits cut others running a little more than half-way round the can and bend back, at right angles, the flaps so formed. Cut

MADRONA-BERRIES MRS. C. B. FLETCHER

FIRST PRIZE — CHRISTMAS-CARDS

out the "seam" of the can and bend it into the shape of a handle, insert the ends in slits cut in the back of the can and bend them down on the inside. To the center of the cover fasten a spring-clip by passing a wire through holes in the top and twisting together the ends. To use the ribbon, wind it into a spiral by twisting it around a small pencil and suspend it from the clip. There is less danger from this ribbon than from any other form of flash, its greatest fault being its comparative slowness. For interiors, or for lighting up dark corners during a prolonged daylight-exposure, it is ideal, giving comparatively little smoke and dust.

Flash-sheets are somewhat similar to magnesium ribbon, coming in small sheets by the dozen like printing-paper. For occasional use in the home where large flashes are not necessary, Eastman Flash-Sheets are admirably convenient and efficient. They are not instantaneous, requiring about one second to consume, and so are especially well suited to the making of interiors and portraits; even groups and genre-studies may be made if a little care is exercised. One or more sheets may be pinned to a large cardboard and lighted with the flame of a wax taper, or one of the convenient Flash-Sheet Holders may be used.

For more pretentious all-around work some sort of lamp is indicated, the limitation of the old type of "blow-through" lamp using pure magnesium being that it is not quick enough for large parties, banquets and groups, particularly children, where there is likely to be movement and consequent blur with a slow flash. The solution of this seeming difficulty lies in the employment of a special type of lamp intended for use with explosive powders, such as those used for many years in small flash-cartridges like the Eastman, Actino and Luxo. Such powders as Agfa Blitzlicht, Victor, Aucelo, Prosch Sunlite, Nichols and Luxo are referred to. Several of these lamps are intended to hold in the hand, whereas others stand on a tripod and often have diffusing- or reflecting-screens, or both; often, too, a smoke-bag also serves all three purposes. For $3.50 to $5.00, according to size, a Prosch Hand Flash-Bag may be had to use in conjunction with any hand or stand flash-lamp that one may already happen to have. Going a step further, flash-lamps may again be divided into two classes, according as they are fired mechanically or electrically.

Of the hand-lamps mechanically fired may be mentioned Smith's Automatic Dependable, the Ingento Flash-Pan, the Caywood with its cartridges of assorted sizes obviating the weighing of powder, the Agfa, the Spreadlite and the Nichols. A trigger fires a paper cap or parlor match in all except the Agfa, which is ignited by a small revolving wheel of spark-giving metal. Of similar construction, except for a tripod support, are the Lieber and the Eagle, with a pneumatic bulb to fire a percussion cap, the latter being equipped with an umbrella screen for reflecting or diffusing as desired. A smoke-bag may be had with the Eagle lamp at a slightly increased price. The Nichols also has an umbrella screen and is fired by a pneumatic bulb, which blows a small alcoholic flame through a blast-tube where it ignites the powder.

For large and serious work electrical tripod-lamps are safe and reliable, quantities of essential importance to the professional artist. They have the advantage that any number of them may be distributed about a large hall, electrically connected and fired simultaneously by

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SECOND PRIZE
CHRISTMAS-CARDS

CHRISTMAS-MORN ERWIN MARTY

one push-button. The Helios and Prosch Blitzlite are good examples, the former being particularly notable for its squibs or cartridges and a safety device for testing connections before firing. The Prosch burns either loose powder or an envelope cartridge. An efficient but smaller and much less expensive lamp will be found in the Ingento.

Having decided how the flash is to be produced, other important points may be considered. For firelight-effects, or anything where the source of light is included in the picture, a double-coated plate gives better results because of less likelihood of halation. Films are also good and seldom give trouble. In artificial light-effects one does not desire *too* much detail in the shadows; but the eye sees *some* gradations of tone and so many photographs represent the shadows as one solid mass of dead blackness. The use of a reflector is a great help to obviate this; but it must not be brought too near, otherwise it may give an effect of cross-lighting very disastrous to the pictorial quality for which we are striving. If we are working by daylight, enough outside light may be admitted to do away with the Stygian blackness of the foreground; but an overdose would spoil our effect entirely.

In the evening we must depend on reflectors, for what artificial light there may be will have virtually no effect on the plate during the short exposure. It is a mistake, however, to turn off the lights, as the sudden bright light following the darkness is sure to give a staring expression, because of the dilated pupil of the eye. It is hardly wise to have the sitter look directly at the flash, as the brilliancy of the light is almost blinding and, especially with children, might possibly be injurious to the eyes. Too much care cannot be taken that nothing of an inflammable nature shall be near the flash and that the operator's hands be protected.

PHOTO-ERA for February, 1913, has an interesting article by E. C. Johnston, telling how he made his camera and flashlight help to pay his way through college. The same number has also a helpful article by David Bevan on "Flashlights in the Home."

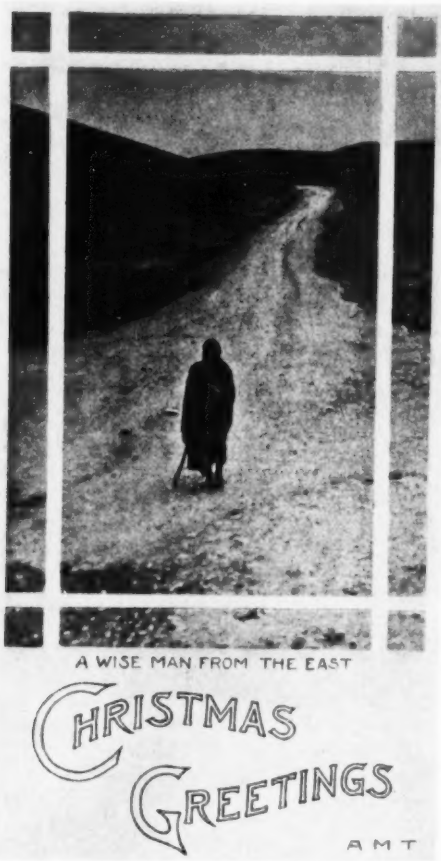
Choose for your subject something of interest in itself, and then use all your knowledge and skill in pose and lighting and show us the results.

Intensifying Thin Negatives

WHEN the result of overexposure or underdevelopment, immerse the fixed and slightly-rinsed negative in the following until dense enough, then wash:

Water	10 ounces
Sodium sulphide, anhydrous	2 ounces
Mercuric iodide	45 grains

Keep this solution in the dark, as the light discolors it. A negative so treated may turn yellow in time unless, after intensifying, the negative is placed for a few minutes in a metol or metol-hydroquinone developer.



A WISE MAN FROM THE EAST ANSON M. TITUS
THIRD PRIZE — CHRISTMAS-CARDS

WHEN WE WENT CAROL SINGING A. MURRAY
HONORABLE MENTION — CHRISTMAS-CARDS

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, *383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

A. N. — For all-around purposes an **acetylene generator** and burner will prove best when electric current is not to be had. The light may be used with condensing-lenses for enlarging, or with simple paper or cloth screens for portrait-lighting. For ordinary printing such a light is unexcelled.

A comprehensive and inexpensive book on studio construction is No. 50 of the Photo-Miniature Series.

H. W. I. — **To photograph cut-glass dishes or metallic objects with polished surfaces,** rub a ball of soft putty over the article and photograph against a black ground with the light falling from one direction and all reflections stopped with black screens. A dodge often made use of is to fill cut-glass dishes with ink or black aniline dye. Bright metal parts may be painted to dull reflections with a thin cream composed of white lead and turpentine, grayed with lamp-black and one-sixth part of gold-size. Turpentine or benzine on cotton waste will remove this paint after the photograph has been made.

N. O. R. — **The color of a negative affects its printing-time.** Negatives of a brownish-black color should be less intense than those of a grayish-black to give the same printing-quality, and the warmer the color, the longer the printing-time.

AN AUTUMN LANDSCAPE — WALTER L. BROWN

FIRST PRIZE — BEGINNERS' CONTEST

P. G. R. — A **fixing-bath formula with citric acid** instead of acetic is as follows:

Water	16	ounces
Hypo	4	ounces
Sodium sulphite, anhydrous	¼	ounce

When fully dissolved add the following hardener:

Powdered alum	⅛ ounce
Citric acid	⅛ ounce

A favorite **all-around developer** for plates, lantern-slides, bromide and gaslight papers is as follows:

A

Water	16 ounces
Metol	4 grains
Sodium sulphite, anhydrous	40 grains
Sodium phosphate	8 grains
Hydroquinone	7 grains
Hypo solution, 10 per cent	4 minims

B

Water	20 ounces
Potassium carbonate	2 ounces

For use, take equal parts of A and B.

In the case of **double-coated plates,** the image does not come down to the glass upon development so that it may be seen on the back of the plate. For this reason, factorial and tank-development are virtually necessary. If correct exposure bothers you, factorial development may be the preferable method for a while. Anyway, it may be used as a test of tank-development, for it is next to impossible to tell exactly how a correctly developed double-coated plate should look; that is, how much its surface will have been darkened, and to what extent the image will seem veiled upon looking through it.

If you use the tank-developer advocated for Orthonon plates for the time and at the temperature suggested, you should have no trouble in obtaining good negatives, provided the exposures are approximately correct. If you do have trouble, however, the best course is to adopt factorial development for a while and examine the correctly-timed negatives very carefully; it will soon give you a splendid idea of the appearance of correctly-developed negatives.

The pyro formula is best for the test. It follows:

A

Water	16 ounces
Oxalic acid	10 grains
Pyro	1 ounce

B

Water	16 ounces
Sodium sulphite, anhydrous	2 ounces

C

Water	16 ounces
Sodium carbonate, anhydrous	1 ounce

For Orthonon plates, take 1 ounce of each and 15 ounces of water. The factor is 15. Count in seconds the time from immersion until the highlights appear, and multiply by 15, which will give the time of complete development.

For the tank, take 1 ounce of A and C, 1½ ounces of B and make up to 64 ounces with water. Time of development at 65 degrees, 30 minutes.

SECOND PRIZE
BEGINNERS' CONTEST

"DADDY SAYS IT BURNS!" ROLAND B. HALL

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, *383 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

N. L. — If you will make use of the data-blanks provided and send data with your prints, it will be much easier to supply constructive criticism.

The photograph of a snow-covered mountain-range suggests over-correction with too deep a color-filter. This leaden look is not true to nature and is not pleasing to the eye.

All of the other three prints are underexposed. That seems to be one of your faults. The roadway, with its downhill perspective and man walking, is an attractive subject well composed, but the effect of sunlight would be much more realistic if the shadows possessed the detail of longer exposure. "Swiftwater Creek" would seem less like frozen ice and the distant forest much less solid black had more time been given. In other words, if you actually stop the motion of water with a shutter, there is no sense of motion in the photograph; on the other hand, if the exposure is too long, the result is too streaky. The other roadway is a good composition, but it also needs more detail in the fir-trees. Had the fence-post so prominent at the left been excluded by advancing the camera a foot or so along the road, a marked improvement would have resulted.

M. J. B. — "The Song of the Robin" is nice in sentiment and good in technique; also the figures are well placed, though perhaps they might well have been nearer to convey something of the facial expression. The background-trees are so graceful that it seems a pity that the prominent trunk at the right is so uncompromisingly straight. Such long straight lines are usually ugly in nature, and a foreground-tree should be as picturesque as possible. Print on a buff matt-surface paper, either gaslight or platinum, and tone to sepia.

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SHEEP GRAZING — MARSHALL FOWLER

THIRD PRIZE — BEGINNERS' CONTEST

W. C. C. — Your two prints are very good technically. "The Quiet Stream" could hardly be better, and in composition it is excellent. Nature was not so kind to you in "Wind-Tossed Birches," however. The point of disappearance in the road, to which the eye inevitably strays, is too far to the left. It would better have been about one-third from the edge of the print. This would also have brought the tall, straight tree more into the print where the severity of its straightness would have been less noticeable. A severely vertical tree seems out of harmony with the graceful diagonals.

C. S. F. — The technical quality of your work is very good, but the subjects lack general interest, although no doubt prized by you as records. Views through doorways and windows are always of strong appeal and yours is very good. It is always desirable, however, to show an entire piazza-chair or else eliminate it altogether. The view of the landing would have been improved had a nearer viewpoint excluded the nearby pile. "Clouds" is well named, for there is nothing else in the picture except the silhouetted skyline. A little detail in these buildings would have been more nearly what the eye actually sees, would have lent greater interest and would not have detracted from the importance of the clouds to any considerable extent.

B. B. — "Where the Redfish Abound" is attractively composed and interesting to those not often seeing an Indian encampment. The high viewpoint, however, seems to dwarf the tents and suggest a toy-outfit. An enlarged print would help matters in this respect.

"The Road to the Lake" would have been better were the figures together and none looking backward into the camera. At present there are two centers of human interest where there should be only one.

In both of these pictures the mountain-tops are cut off. This seems a pity, for the inclusion of them would lend great interest and dignity to the compositions. The fancy mask through which you have printed "The Road to the Lake" is not to be encouraged. It is too prominent and detracts from the picture.

G. C. S. — Your portraits would appeal to us more if they seemed more spontaneous and less posed, although thousands of just such positions are photographed by professional artists. The chief fault of "Ready for School" is the prominent pattern of the wall-paper. A plain ground is preferable, but were this wall-paper twice as far back of the little model, it would be so far beyond the focal plane as to be almost lost. The other portrait lacks texture in the white dress. Orthochromatic plates are needed for this work, and care must be taken not to over-develop. A soft-working developer is also a great help to ensure better gradation.

The flower-subject is too crowded in the space, the base of the glass not showing. Sharper definition would also improve the photograph.

WOODLAND-SHADOWS — IRENE LIBBY

HONORABLE MENTION — BEGINNERS' CONTEST

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value $5.00; *Second Prize:* Value $2.50; *Third Prize:* Value $1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is **"General;"** but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with *double thicknesses of* **stiff** *corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

First Prize: Walter L. Brown.
Second Prize: Marshall Fowler.
Third Prize: Roland B. Hall, Jr.
Honorable Mention: E. Keaough, Irene Libby.

Special commendation is due the following workers for meritorious prints: T. Arai, R. L. Bush, John Cable, W. C. Canfield, Wm. H. Clark, Jr., Louis Clockman, Roscoe W. De La Mater, J. F. Fensel, R. M. Goho, W. F. Hamburgh, Mark C. Housman, Gardner D. Howe, O. P. Lynum, J. George Midgley, Lewis A. Miles, Edgar K. Randall, Ruth M. Salton, Chas. S. Schulz, J. H. Shackleton, Desmond A. Timmons, A. J. Voorhees, S. A. Weakley.

IN THE SHEEPFOLD — MARSHALL FOWLER

Exposure-Guide for March

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take ¾ of time in table. From 8000 to 12000 feet use ½ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	1/50	1/25	1/12	1/5	1/3
9-11 A.M. and 1-3 P.M.	1/40	1/20	1/10	1/5	1/2
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/3	2/3
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/2	3/4
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/2	3/4	1

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

* These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. × 1¼; 55° × 1; 52° × 1; 30° × ½.

For other stops multiply by the number in third column

F/4	U. S. 1	× 1/4
F/5.6	U. S. 2	× 1/2
F/6.3	U. S. 2.4	× 5/8
F/7	U. S. 3	× 3/4
F/11	U. S. 8	× 2
F/16	U. S. 16	× 4
F/22	U. S. 32	× 8
F/32	U. S. 64	× 16

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 to 48 Badly-lighted river-banks, ravines, glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example:

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an *open landscape, without figures,* in March 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/ 40 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/40 × 4 = 1/10. Hence, exposure will be 1/10 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/40 × 1/2= 1/80. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

Society or Title and Place	*Date*	*Particulars of*
B. Y. M. C. U. Camera Club	March 4 to 8	F. W. Hill, 100 Boylston St., Boston, Mass.
Kodak Exhibitions		Eastman Kodak Company, Rochester, N. Y
San Antonio, Bethoven.	March 2 to 7	
Houston, Auditorium.	March 9 to 14	
Kansas City, Convention Hall.	March 17 to 21	
St. Louis, Coliseum.	March 23 to 28	
Chicago, First Infantry Armory.	March 30 to April 4	
Racine Camera Club	Feb. 20 to March 20 1914	O. R. Thompson, President, Racine Camera Club, Racine, Wis.
Photo-Era Prize-Pictures.		
Oregon Camera Club	February 20 to 27 1914	C. F. Richardson, President, Oregon Camera Club, Portland, Oregon.
Photo-Era Prize-Pictures.		
Toronto Camera Club Salon	April 27 to May 2 1914	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
Wanamaker Annual Exhibition	March 2 to 31 1914	John Wanamaker, Photographic Dept., Philadelphia, Pa.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma (Violet Label)
Marion Record

Class 1/2, P. E. 128, Wy. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Seed Gilt Edge 30
Wellington 'Xtra Speedy Extreme

Class 3/4, P. E. 120, Wy. 200, Wa.
Ansco Film, N. C. and Vidil
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Imperial Special Sensitive
Paget Extra Special Rapid
Paget Ortho Extra Special Rapid
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, Wy. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Imperial Non-Filter
Imperial Orthochrome Special Sensitive
Kodak N. C. Film
Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor
Lumière Ortho A
Lumière Ortho B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Ilford Chromatic
Ilford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Ilford Ordinary
Cramer Contrast
Ilford Halftone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.
Lumière Autochrome

XUM

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

A PORTRAIT of a baby from the studio of a talented woman-artist honors our front cover and page 119. Nowhere in the world are so many photographs made of children, and so many poor ones, too, as in this country. Fortunately the children's portraits which enhance Miss Loehr's tribute to America's women-photographers in this issue are uniformly unspoiled by incongruous accessories. Thus, Miss Reineke's little fairy appears arrayed in sweet simplicity — nothing to mar or distract. Even the chair, although a little severe in design, is plain and sets off the little figure admirably. The workmanship is flawless and harmonious; the expression serious and thoughtful, as becomes a true portrait. Data: 11 x 14 Century Camera; Goerz Celor, 8½-inch focus; stop, F/5.5; Sept. 2, 1913; 11 A.M.; in studio; 8 x 10 Cramer Crown; Eastman Sepia Buff print; for reproduction, Professional Cyko.

An attractive study by the masterly Gerhard Sisters forms the frontispiece of our March issue. A shapely, well-modeled face, with warm, rich color and true tonal values is here associated with virility of design and straightforward technique. The work of these admirable artists is the result of patient, intelligent and well-directed study. This graceful arrangement, entitled "Fern," reveals a sound knowledge of the principles of art and a familiarity with the works of the great masters in portraiture. One notes with pleasure how well the picture is balanced by the mere turn of the eyes — a trick practised so successfully by Van Dyck and other great portrait-painters. We dwelt at length on the remarkable talent of the Gerhard Sisters in our September number, 1913, which was embellished with the profile of a young girl, PHOTO-ERA's choice of the pictorial section of the Kansas City convention. Data: June, noon; north light; 8 x 10 Century Camera; Zeiss Tessar, 14-inch focus; full aperture; 2 seconds; direct platinum print.

That the photography of children is woman's natural domain, is generally admitted. Her ready understanding of the child's moods and caprices and her gentle, ingratiating ways of winning its confidence enable her to interpret the little one's sweet and innocent self as has not been given to the average artist of the opposite sex. So it is not strange that women, such as are referred to in Miss Loehr's admirable paper, excel in this important branch of photographic art. One needs but to gaze on the exquisitely beautiful portraits by Sara F. T. Price, Frances and Mary Allen, Katherine Jamieson and Miss Reineke. It is consummate art. Data: "Portrait of a Child," page 108; June, 11 A.M.; side windows; Eastman Studio Camera 11 x 14; Hermagis lens, 14-inch focus; full aperture; Standard Ortho; Ortol; Etching Sepia print.

"Robert," page 109; out of doors, shady side of house; 6½ x 8½ Rochester Camera; B. & L. Extra Rapid lens; full aperture; 1/10 second; Cramer Crown; hydro-metol; rough platinum print.

Alice Boughton's group, page 111, has the merit of being interesting and unconventional. The combination of the three figures is unusual in that the seated one, being in itself well posed, is placed against the standing group also well arranged, but the ensemble suggests a disagreement, a story. Nevertheless, the picture is a portrait-group of the pyramidal form and exemplifies the artist's well-known ability.

As a symbolical representation, Virginia Prall's effort, "The Spider," page 112, is strikingly dramatic and effective, and demonstrates a fine artistic sense. Data: light, east and southwest; 8 seconds; Voigtländer & Sohn's lens; Willis & Clement's Platinotype print.

The charming group by the Goodlander Sisters, page 113, is, strictly speaking, a genre, a home-scene, and demands the rare artistic skill and refined taste for which these artists have gained an enviable reputation. Data: Home-portrait; September, forenoon; south and west light; 6½ x 8½ Empire State Camera; B. & L. R. R. lens; full aperture; 2 seconds; Artura Iris print.

Nothing that we have seen from Nancy Ford Cones' portfolio approaches in power, breadth and suggestion the engrossing scene, page 114. The composition and lighting of the group is worthy of high praise, but the spacing would be more logical if the hearth were less obscured. Data: August, 2 P.M.; good light; 8x10 Gundlach Camera; R. R. lens; stop, F/16; 3 seconds; Seed 26x; hydro-metol; Azo A print.

The head of a man, by Jeanette Bahlman, page 116, evinces fine qualities, and demonstrates the ability to manage the light with pleasing effect. Data: 11 x 14 rough platinum print.

Belle Johnson has widened the field of child-life, and her remarkable control over animal-pets as camera-subjects enables her to obtain combinations in her studio that defy the efforts of most photographers. She is a successful specialist by dint of long and patient work. One of her happiest achievements in this direction is presented on page 117. Data: June, 11 A.M.; north light, bright day; 8 x 10 Century Camera; Verito lens; 11½-inch focus; stop, F/5.6; quick bulb exposure; Cramer Crown; pyro-acetone; Artura A print.

Each of the succeeding four portraits is an excellent example of the ability of the respective artist — good, average work and highly creditable.

Mary Carnell, page 123. Data: November, 11 A.M.; north light; 8 x 10 Studio Camera; Bausch & Lomb lens; 12-inch focus; direct Azo print.

Katherine Bingham, page 123. Data: north studio light; 8 x 10 Century Studio Camera; Goerz Doppel Anastigmat; 16½-inch focus; 5 seconds; Seed 26x; pyro-acetone; direct American platinum print.

Clara Estella Sipprell, page 124. Data: 5 x 7 Studio Camera; Vitex lens; instantaneous; plate; rodinal; platinum print.

May L. Smith, page 124. Data: light from side-window, screened, no reflector.

The work of F. W. Hill has contributed to the growing reputation of the Boston Y. M. C. U. Camera Club, of which the artist is one of the ablest and most industrious workers. The winter-landscape and the marine, pages 126 and 127, were among the best pictures of the club's annual prize-contest held last December and were mentioned in January PHOTO-ERA, 1914. Mr. Hill was awarded first prize in PHOTO-ERA's "Shore-Scenes" competition for his superb picture, "The Pearl of Orr's Island," reproduced in January, 1914. Data: "Winter-Landscape," January, 8 A.M.; bright light; 4 x 5 Korona Camera; 7-inch Smith lens; stop, F/6; 1/15 second; Wellington Anti-Screen plate; pyro-acetone; Wellington Bromide, 6½ x 8½; "Breaking Waves;" August, 10 A.M.; bright sun; 6½-inch R. R. lens; stop,

F/6.8; 1/25 second; Wellington Anti-Screen plate; pyro-acetone; Wellington Bromide, 6½ x 8½.

The inadequacy of the camera to interpret the nude human figure is well known. However, in the hands of a photographer with artistic instincts and sufficient technical ability praiseworthy results are possible, as in the case of the nude study of a boy, by M. L. Vincent, page 128. Here the flesh-values are excellent and several steps removed from objectionable literalness. The pose is graceful and well balanced. Data: Indoors; October, 10.30 A.M.; east-window; dull light; Central Non-Halation Special; Rodinal; 4½ x 5½ Cyko Professional Platinum print.

The portrait of a Scotch collie is admirable in its truth and its breadth of treatment. Data: November, 4 P.M.; clear sky; 4 x 5 Reflex camera; focal-plane shutter; 1/15 second; Carl Zeiss Tessar; 8¼-inch focus; stop, F/5.6; Standard Orthonon; edinol-hydro; 8 x 10 Wellington Platinum Rough Bromide; amidol; enlarged from part of negative.

Käte Hecht's illustrations of her own article on the photography of animal pets, pages 130 to 133, are among the best that have ever come to our attention. Admirable examples of artistic photography, despite the numerous obstacles that must have been encountered, these fascinating pictures reveal traits in animals that one scarcely would suspect, and also serve to demonstrate the remarkable degree of ingenuity, skill and patience, as well as of artistic perception, displayed by this gifted specialist. Data are included in Miss Hecht's article.

The Photo-Era Monthly Competition

THE Christmas-card competition yielded a large number of results, many of which, however, failed to exemplify the spirit of the subject and also failed to demonstrate the many artistic possibilities it offered. The successful entries show much thought and adequate technical skill, combined with an expression of timely sentiment.

Mrs. Fletcher's experience as a prize-winner in PHOTO-ERA competitions is interesting. Having been awarded Honorable Mention a number of times — but no prize — in the advanced class this accomplished camerist tried her fortune in the Round Robin Guild Competition, where she captured second prize. (See February issue.) Then she re-entered the competition for advanced workers and captured first prize. No doubt, some one may remark, "Verily, the ways of a jury are past understanding." This may be true from the view-point of an outsider; but the entries do not always represent the highest artistic standard. The success of a print in a competition depends not only upon its own merit, but upon the number and quality of the other entries. It is obvious, therefore, that the chances of success of an entrant are likely to be better in one competition than in another, the matter of luck playing a considerable part.

Data: "Madroña Berries;" 5 x 7 Century Camera; R. R. lens, at full aperture; ray-filter; 1/25 second; Defender Ortho; Defendol; Nako C. Soft print.

Although conventional in design, Erwin Marty's effort, page 138, exemplifies the popular Christmas-idea. On account of the violent contrast of objects generally introduced into pictures of this sort, a thoroughly artistic result cannot always be expected. It is easy enough to eliminate or to obscure conspicuous white objects, such as the large white spaces which detract from Mr. Marty's otherwise happy arrangement. Data: Christmas morning; flashlight illumination; 5 x 7 Empire State Camera; 7-inch Dagor; stop, F/16; Cramer Inst. Iso; pyro tank; 5 x 7 print (trimmed) Professional Studio Cyko.

Sentiment, suggestion and fitness distinguish the print by A. M. Titus, page 139. The design is original and the photography creditable to our camerist's well-known skill. Data: March, 1910, in Palestine; bright; N. C. Eastman film 3¼ x 4¼; B. & L. Zeiss Tessar, series IIB; 5¼-inch focus; stop, F/8; 1/25 second; pyro tank; enlargement on Wellington Bromide; copies on Cyko.

Although no snow marked the landscape at the initial Christmas season, the character of the climate must conform to the locality of the celebration of the hallowed event. Winter serene reigns in Mr. Murray's Christmas greeting, page 139. The expression of the sentiment is here well placed — in the foreground, without seriously marring the picture. Data: Christmas morning; good light; 4 x 5 Premo Camera; B. & L. special universal; 6½-inch focus; at F/16; 2 seconds; ray-filter; Cramer Iso Medium; amidol; 6½ x 8½ P. M. C. bromide; lettering with carbon transfer-paper on glass side of negative.

The Beginners' Competition

A ROW of corn-shocks is a time-worn camera-subject; but the excuse for using it is the excellence of the result. Besides, it serves to demonstrate to the average critical mind how much better — if any — than the other fellow this camerist performed his task. Walter L. Brown has treated this popular theme with artistic discretion, and, in several respects — arrangement and breadth — has beaten the other fellow. See page 140. Data: November, 1913; 9 A.M.; bright, but hazy; 5 x 7 Cycle Graphic; Zeiss Protar series VIIa; used single element 16⅛-inch focus; at F/16; ½ second; Standard Orthonon; glycin, tank; Professional Buff Cyko enlarged from part of negative; toned with Artura Hypo-Acid toning-bath; clouds printed in from separate cloud-negative.

The posing of a child — except as a portrait — without an obvious purpose, is not satisfactory, as a rule. It does not require much imagination or ingenuity to associate the child-model with a happy, suitable idea. Roland B. Hall has realized the possibility to create an attractive scene before his fireplace, in itself an object of artistic design. Page 141. The attitude of the boy is one of expectancy or curiosity, and the little story is simple, obvious and well carried out. Data: 3¼ x 4¼ Film-Plate Premo; Kodak Anastigmat; at F/9; flashlight (in the grate and for direct illumination); Orthonon; metol-hydro; Royal Bromide enlargement.

Apropos of threadbare motives and their treatment along new lines, we are pleased to welcome Marshall Fowler's picture of sheep, page 142. Most camera-efforts in this rural field show no attempt at a pleasing arrangement, the animals moving or standing in promiscuous fashion. The camerist must exercise much patience or ingenuity if he would capture a group of sheep or cattle with pleasing lines. Whether by mere chance or dint of perseverance, Mr. Fowler has produced a group of much artistic merit. Data: 1A Kodak; R. R. lens; stop U. S. 4; Eastman film; 1/25 second; Kodak powders in tank; 5 x 8 Velvet Bromide enlargement.

The pictorial presentation of real winter in the woods, on page 142, looks as if it might have rested on a painter's easel, it is so ingenuous in its appeal. It is a happy bit of naturalness, quiet and peaceful, with easy, artistic lines. The foreground here is particularly pleasing with its contrasted sunshine and shadow fallen tree-trunks and branches. No data.

XUM

ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

Art-Forgeries Revealed by Photomicrography

A DEMONSTRATION of the value of photography in detecting spurious works of art was given by Prof. A. P. Laurie, of the University of Edinburgh, before the Royal Academy in London recently. Some of his demonstrations amazed his audience, although he warned his hearers that evidence by his method must be applied with other evidence, which had nothing to do with photomicrography.

Professor Laurie prefaced his lecture with a short discussion of the similar aid to be derived from particular pigments, according to the date of their appearance or disappearance in the history of art. By means of a table dated from the year 800 to 1800 A.D. he showed that, while the use of certain pigments had persisted during the whole period, others had died out during the middle ages. At intervals new ones appeared, two at least, chrome yellow and Scheele's green, which had not been used before 1800 A.D. Prussian blue was also a late comer, beginning about 1750 A.D. Knowledge of these and similar facts would limit considerably the field of possibilities in establishing the date of a picture.

Professor Laurie then showed on the screen ordinary photographs of a painting by Watteau and of a good copy by a modern artist. Seen thus, it was impossible to distinguish between the two; but when photomicrographs of a head in the original picture and of its copy, magnified about three diameters, were thrown on the screen, a striking difference in the brushwork became apparent. That of Watteau was extremely fine, following the contours of the head with logical beauty; whereas that of the modern copyist, good though his work appeared without painstaking microscopic aid, was really haphazard.

In the same way the lecturer showed photomicrographs of the brushwork of Mabuse, Raphael, Van Dyck, Rembrandt, Teniers, Hals, Hobbema, Ruysdael, Velasquez, Corot and Troyon. Two series, of eyes and of details of foliage, as treated by the different artists, were extremely interesting not only from the point of view of identification, but as an object-lesson to students of masterly handling.

The Mona Lisa Again

IT may astonish some PHOTO-ERA readers to learn that there are many art-connoisseurs who are skeptical regarding the genuineness of the picture of Mona Lisa, which was recovered recently in such a theatrical manner and restored to the Louvre. It is asserted that a country which can produce imitations of works of art so cleverly executed as to deceive even experienced art-experts, is capable of making a copy of Mona Lisa that might pass easily for the lost original. The apathy displayed by the authorities towards the alleged thief is in itself suspicious. These doubting Thomases assert that, unable to recover the stolen Mona Lisa and realizing that something should be done soon in order to profit by the sensational disappearance of the picture, the authorities conceived the idea of having a duplicate prepared and plausibly brought to light.

The incidents which immediately followed the recovery of the picture were highly sensational, but savored of insincerity. Why, the director of fine arts in Rome, after hastily examining the picture alleged to have been recovered, declared it to be the lost original, and offered to give up his official position — salary attached — if his statement proved to be unfounded. The alacrity with which officials approved the verdict of the Florentine art-dealer — to whom the self-confessed thief tried to sell the picture — reminded certain skeptical persons of the fiasco of Dr. Cook's enthusiastic reception by the Danish people after his supposed discovery of the North Pole. A shrewd American businessman remarked that the $48,000 reward paid to the Florentine art-dealer for recovering the picture was a very small sum compared to the millions of dollars' worth of advertising that had already accrued to the famous portrait.

Another thing that has been regarded as "fishy" is that, according to his confession, the alleged thief concealed the wooden panel, upon which the portrait of Mona Lisa was painted, under his blouse and departed without exciting the least suspicion. The panel, as taken out of its frame, measured 21 x 30 inches! If any one thinks that it is easy to steal away with an object of such dimensions concealed on his person, let him try the experiment — in his home or among friends. There are doubtless many who, without wishing to impugn the integrity of distinguished art-authorities, have declined to believe the story of the recovery of the stolen Mona Lisa, but are rather disposed to consider the whole affair a clever scheme devised to lure the curious and the gullible — of which there are millions scattered throughout Europe and America. The play was well planned and effectively staged, and the production with its picturesque settings and eminent *dramatis personæ* did, indeed, astonish the world. It is interesting also to speculate as to the number of persons who will journey to Paris next season for the purpose of gazing upon a picture which, even if it be the original, has long ago been pronounced by recognized art-experts to be nothing more than a pictorial wreck.

The First Motion-Picture

IN a recent issue of a large American daily, the statement was made that a camera, operated by a winning horse breaking a thread, had been invented in France to judge races.

Shades of Muybridge! The managing editor ought to have consulted a photographic encyclopedia, where, under "Kinematography" or "Motion-Pictures," he would have discovered that so long ago as 1877, in his investigations of the progressive movements of animals, Edward Muybridge, an American, erected a large shed containing a battery of cameras and, stretched in front of it, at right angles, a series of threads, which were broken as the subject (a man on horseback) proceeded along the course. The breaking of each thread communicated electrically with the corresponding camera in the enclosure and effected the necessary exposure just at the moment when the horseman was opposite the lens. As dryplates were less sensitive in those days than at the present time, the resultant pictures were only silhouettes; yet, when arranged in order and viewed in a zöetrope — an invention ascribed to Mr. Muybridge — the result was a series of very satisfactory and convincing motion-pictures.

XUM

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Universal Developers

I. — Duratol

DURATOL, one of the newest of the coal-tar developers, is used only in combination with hydroquinone. While it differs but slightly in its chemical composition from metol, its action is considerably different in that when combined with hydroquinone fogging seems to be almost impossible. It is non-poisonous; it brings out detail as well as pyro, gives good density without blocking the highlights, keeps well in solution both before and after use, works equally well on plates, films and papers, is excellently adapted to tank-development. It permits the use of a large percentage of hydroquinone, which is very cheap, and it does a very large amount of work. The following formula is suitable for plates, films, lantern-slides, gaslight and bromide papers:

Water	40 ounces
Duratol	15 grains
Sodium sulphite, anhydrous	1 ounce
Sodium carbonate, anhydrous	2 ounces
Hydroquinone	75 grains

Dissolve the Duratol in 32 ounces of warm water, about 120 degrees Fahr. Do not use water that is hard. If boiling does not soften it, use rain or distilled water. Mix the sodas *dry* and add them to this solution. If they are added separately, a precipitate will result. Then add the hydroquinone, which will dissolve quickly. Allow the developer to cool to about 70 degrees, then filter, if desired, through cotton or filter-paper, and make up the volume to 40 ounces by adding more water.

Used full strength, plates and films develop in 5 to 8 minutes. The factor is 9 to 15, according to the density and contrast desired. A small factor may well be adopted for portrait-work and all subjects requiring delicacy and softness, and a large factor for landscapes and other subjects in which more vigor is wanted.

For tank-development, take 1 part stock-developer and 3 parts water. The time will be 30 minutes at 65 degrees Fahr. For fast plates and films, increase the time of development about one-fourth.

If to that portion of the stock-solution which is reserved for developing plates and films a solution of acetone sulphite be added, the keeping-qualities of the developer are further increased and the fogging-tendency of time-expired or faulty emulsions are considerably restrained. This fogging propensity, which is too often erroneously ascribed to the developer, is enhanced by diluting the developer; hence the advantage of using acetone sulphite for tank-work. Prepare the solution by dissolving 1 ounce of acetone sulphite in 7 ounces of cold water, and add 1½ fluid ounces to each 40 ounces of D. Q. stock-developer.

For gaslight and bromide papers the stock-developer is used full strength; the amount of potassium bromide solution, 10 per cent, depending upon the tones desired and the particular emulsion in use. In general:

For blue-black tones, omit bromide.
For platinum-blacks, add 1 drop of bromide to each 2 ounces of developer.
For warmer blacks, add 4 to 8 drops of bromide to each ounce of developer.
For sepias by the sulphide process, omit bromide.
For sepias by the hypo-alum process, add 4 to 8 drops of bromide to each ounce of developer.

Development of papers will vary from ¾ to 2 minutes in duration, according to the brand, thus affording great control in development. Rinse prints before fixing or use an acid short-stop.

Photographic Reproductions with the Aid of Blue-Prints

JOHN LEWISOHN, of New York, has invented a method of making colored photographic reproductions, in which the blue coloration in a blue-print is utilized as one of the primary colors.

A negative of a colored object is made on an ordinary orthochromatic photographic plate, using a yellow-colored screen, in order to obtain the best color-values. From such a negative, an ordinary blue-print is made, which blue-print will, of course, show up the different shade-values in their proper proportions. This blue-print is then colored, either wholly or in part, by applying red eosine and aurantia, or a mixture of the two, to modify the blue to form any of the spectrum-colors, the blue coloration showing through the applied washes with more or less intensity, depending upon the extent of the coating-wash. Should it be desired to make all or any material portion of the print either red or yellow, or any other color in which blue is not used, the blue of the blue-print is either wholly or partly dissolved by a weak solution of silver nitrate, which will fix the colors, and, at the same time, gradually bleach out the blue. Further, the blue-print may be washed with this solution, if it is desired merely to weaken the blue color of the object, after the eosine or aurantia has been applied, or a mixture of the two, to form any of the spectrum-colors involved in these two primary colors. Should it be desired to restore the blue locally or entirely, or to darken the blue color, the blue-print is respectively touched up or bathed with a solution of ferric chloride, and this ferric chloride may be applied in stronger solution or in succession until that part of the object is virtually black. Instead of painting or bathing the entire print in any one of these colors, certain spaces may be touched up locally in order either to darken or lighten those particular parts. In addition to this local treatment, the entire print may be submerged in either of these primary colors, or any combination of the same, to give the different color-background and a different tint to the entire picture. — *Scientific American.*

XUM

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Miles A. Seed

WITH sincere regret we record the death of Mr. Miles A. Seed at his home in Pelham Heights, New York, Dec. 4, 1913.

His first experiments in the making of dryplates were performed in the basement of his home in Woodslawn, near St. Louis, Mo., while he was an operator in a St. Louis studio. In 1883 he built a plate-factory beside his home, the business being incorporated as the M. A. Seed Dry-Plate Company.

In 1902 the business, which had achieved large proportions and an enviable reputation for high quality, was acquired by the Eastman Kodak Co. Mr. Seed continued with the plant for several years, finally taking up his residence in Pelham Heights, where he devoted himself to the flowers he loved and which for many years had been so much a part of his life at his St. Louis suburban home.

Intimate acquaintances of Mr. Seed speak of him in the highest terms and the photographic profession at large knows of his business integrity. During his active business life, as well as since his retirement, Mr. Seed was constantly active in church and charity work, and it was from a cold contracted on a visit to his Bible class in the army barracks of Fort Slocum that his fatal illness developed.

Souvenir Guide-Book through Europe

To Americans who travel through Germany with seeing eyes, and who are impressed with the seething, commercial and manufacturing-activities with which that country is pulsating, it is obvious that the Germans have earned the name, "The Yankees of Europe." There is scarcely an industry in which these enterprising people do not excel us; not a day passes that does not give the overconfident, though industrious, Yankee merchant or producer proof of the superior enterprise of his German competitor. Whatever may appear to the American tourist as an innovation, has actually been in use by the wide-awake Germans for years.

As an instance of this ceaseless commercial spirit may be cited a trifling feature of the magnificent steamship line, Hamburg-American — the travel-book issued by this company *free*, to its patrons, the "Guide through Europe." The volume is published once every three years, each time revised up to date. Its nine hundred pages cover Germany, Austria-Hungary, Switzerland, Italy, France, Belgium, Holland, The United Kingdom, Sweden, Spain, Portugal, Russia, The Balkan States, Turkey, Egypt and Algiers. The information is condensed, clear and accurate. There are up-to-date maps of the principal cities and panoramas, numerous illustrations of sights and landmarks, a table of exchange from and into U. S. Currency, and numerous advertisements of reliable hotels, pensions, shops and German manufactured articles, distributed throughout the book.

Each outgoing steamer of the company has a limited supply of these thoroughly excellent guide-books, printed in English, a copy of which is presented to the passenger as he boards the steamer bound to Europe. It is impossible to procure this book in any other way. It cannot even be purchased.

Eastman Professional School

THERE are two principal ways in which a professional photographer may keep informed of the newest and best methods in photography. One is to attend the more important conventions every year; the other is to attend the Eastman Professional School whenever it is within convenient traveling-distance. The route-list follows:

Buffalo, N. Y.	March 3, 4, 5.
Cleveland, O.	March 10, 11, 12.
Grand Rapids, Mich.	March 17, 18, 19.
Indianapolis, Ind.	March 24, 25, 26.
Chicago, Ill.	March 31, April 1, 2.

Kodak Advertising-Awards

GRAND PRIZE CLASS

First — W. Shewell Ellis, Philadelphia	$500
Second — E. Donald Roberts, Detroit, Mich.	400

CLASS A

First — Geo. J. Botto, New York City	$500
Second — Chas. Luedecke, Philadelphia	400
Third — Belle Johnson, Monroe City, Mo.	250
Fourth — Clifford Norton, Cleveland, Ohio	150
Fifth — J. A. Glenn, Albany, N. Y.	100

CLASS B

First — Albert F. Snyder, Philadelphia	$300
Second — Milton F. Gentsch, Philadelphia	200
Third — Jas. L. Cornwell, Dayton, Ohio	100
Fourth — Geo. H. Seip, Philadelphia	50
Fifth — Hobart V. Roberts, Utica, N. Y.	50

THE JUDGES

Manly W. Tyree, President, Photographers' Association of America, Raleigh, N. C.; Dudley Hoyt, Photographer, New York City; C. C. Vernam, Advertising-Manager, Street & Smith Publications, New York City; O. C. Harn, Advertising-Manager, National Lead Company, New York City; W. R. Hine, Vice-President and General Manager, Frank Seaman, Inc., New York City.

From the circular, announcing the awards to contestants, we quote the following:

"We congratulate those who by their clever work — clever from both the advertising and the photographic standpoint — captured the substantial prizes in our 1913 contest.

"To win, when but twelve winners were to be selected from the 5,500 prints submitted, is a real honor — to lose in such a contest should be no discouragement.

"We thank all of those who participated. The prints which were not awarded prizes will be returned at an early date, and during the winter we shall send to each contestant a portfolio showing a number of the prize-winning pictures.

"EASTMAN KODAK COMPANY."

Ansco Company Offers $5,000 for Photographs of America's Lovely Women

THIS is the first announcement of a contest of highest interest to both amateur and professional photographers. It not only affords the opportunity to win a substantial cash prize, but to gain considerable publicity by having your photographs exhibited to admiring audiences, composed of thousands of people from all parts of the country. The purpose of this contest is to obtain portraits of fifty of America's loveliest women to be exhibited by Ansco Company at the Panama-Pacific Exposition in San Francisco.

Fifty photographs will be chosen in all, and prizes totaling $5,000 will be distributed as follows:

First prize	$500
Second prize	450
Third prize	350
Fourth prize	250
Fifth prize	200

Twenty prizes of $100 each.

Twenty-five prizes of $50 each.

The selection of the winning photographs will be made by three impartial judges, chosen for their special ability to appraise true feminine loveliness.

This contest will, undoubtedly, create national interest, and it will afford a real opportunity for enterprising photographers to profit by it. To promote this national interest, Ansco Company will feature the contest extensively through advertising in the leading publications. In succeeding issues of PHOTO-ERA additional plans, to give photographers the greatest benefit from this contest, will be fully outlined. This special assistance to be rendered by Ansco Company will be very effective.

The contest will begin on May 1 and close December 1. It will be open to all professional and amateur photographers, and competitors will not be limited to the use of Ansco goods. Each competitor may enter any number of photographs, taken with any camera, and printed on any paper. The full details of the competition are being printed in a special folder which will be distributed through Ansco dealers.

What is Photography?

THE question of the day with camera-workers is, When does the work of the photographer stop and that of the artist begin on what to-day is called a photograph?

This subject was presented to the members of the Portland Camera Club, February 2, by Mr. O. P. T. Wish, who had just returned from Boston where, as secretary of the Portland Society of Art, he had attended the annual exhibition of the Boston Art Club.

The reason for this question, at this time, is because of the results obtained by camera-workers all over the country with soft-focus lenses, and by the gum-bromoil and other processes now so extensively used. It is time for camera-workers to define what a photographic print consists of. If it is purely camera-work, well and good. If it is an inferior imitation of a half-printed etching that any foreman in a printing-establishment would throw into the waste-heap, why call it a pleasing piece of camera-work? Mr. Wish put the above question to that famous photographer, Garo, when in Boston, and his answer was, "The photographer's work ceases when the negative is produced." The same question was put to Henry Rankin Poore, of New York, whose book on composition is a well-known standard authority for artists, and who lectured before the Boston Art Club, January 31. Mr. Poore's answer was somewhat different from Garo's — "The work of the photographer ends, and that of the artist begins, when the photographer ceases to use sunlight as his medium to produce results." Photographic work when it comes before the jury is usually judged by artists in oil — artists who do not understand camera-methods any better than the camera-man understands the method or color-harmony used by the artist. Mr. Wish believes with Mr. Poore that the work of the photographer ends when sunlight or artificial light ceases to be the medium to be used in producing results. In discussing the question with Mr. Garo, Mr. Wish claimed that we ought to have two distinct classes of photographers to-day. One to be called photographers, and the other, artist-photographers; the first class to be those who believe in straight photography and the other, those who use any method to produce their result.

Who of us feel like finding any fault with the beautiful results obtained by Garo and his Photo-Clan, the Buffalo Pictorialists or the Photo-Fellows of Chicago? Yet how are those men who are not artists with the brush, but are artists in just as true a sense with the camera, to change their method?

Taking these two questions as a foundation, the members of the Photographic Section of the Portland Society of Art, or the Portland Camera Club, discussed the matter fully and openly, but were unable to come to any decisive conclusion, and the question, "When the work of the photographer ceases and that of the artist begins," remains for others to answer. Why not have a full and free discussion by the readers of PHOTO-ERA?

Lecture by Henry Rankin Poore, A.N.A.

AT the Boston Art Club last January, before an audience composed of artists, laymen and a number of photographers, Henry Rankin Poore, author of *Pictorial Composition and the Critical Judgment of Pictures*, delivered a particularly-prepared lecture, "Art and the Layman." In the course of his remarks the speaker sought to prove that the average educated person knows more about art than he thinks he does, and then considered the fact that he ought to know more than he knows he does. He declared that the layman's judgment of art is not biased by the *means*, so important to the artist. He does not know art through a formula of *tonalism*, *impressionism* or *futurism*, but meets the broader question of *art*, having the same point of view because he has acquired most of the principles at school. By this is not meant the art now taught in the public schools, but rather the principles underlying production, all of which are to be found in the old rhetoric. He discussed the added difficulties which embarrass the painter from which the literary artist is free. "While good literature may plume itself in having its winged words speed directly to their goal, elements have entered into the picture unbidden but sometimes welcome, and others on which the artist has counted have strangely failed to register. It is safe to say that rarely has a picture absolutely expressed the first thought of its author."

The speaker makes a plea for study in the schools of the great principles of art which may be applied to all the arts in common, as to literature, music, painting, sculpture and architecture. These principles are not even taught in the art-schools, which are really places for the study of the technical problems of art and do not touch its higher significance.

Mr. Poore closed by naming a number of the popular misconceptions of art, reconstructing the old dictum, that beauty is truth, into "beauty is unity"; touching upon idealism and realism and scouting the fallacy that in painting there is "only one way."

XUM

Photographers' Association of America

FIRST EXECUTIVE BOARD MEETING

At the call of President Manly W. Tyree, the Executive Board of the Photographers' Association of America met in executive session at the Hotel Ansley in Atlanta, Ga., on Jan. 12, 1914. The following members were present: Manly W. Tyree, President; W. H. Towles, First Vice-President; Homer T. Harden, Second Vice-President, and L. A. Dozer, Treasurer.

At the special request of the President, representatives of manufacturers and editors were called in special conference in order to obtain new ideas to be introduced at the next Convention, and to ensure perfect coöperation between the Association, as a whole, and the firms interested in photographic supplies and magazines.

After a full discussion in conference with manufacturers, editors and dealers, it was voted unanimously to hold the Convention from June 15 to June 20, 1914, in the Auditorium, at Atlanta, Ga.

The committee appointed to employ a general secretary was represented by George W. Harris, Chairman, and Ben Larrimer.

The committee of the Women's Federation was represented by the President, Miss Pearl Grace Loehr, and Mrs. Sarah F. T. Price, Secretary. The members of the Federation were requested by the President to present plans to be followed out in their work.

OFFICIAL EMBLEM

Messrs. Dozer and Hoffman were appointed as a special committee to procure designs for buttons intended to serve not only as an emblem, but as a permanent insignia to be used on all membership-cards, stationery, membership-certificates, etc.

Various suggestions and matters pertaining to the conduct of the 1914 National Convention were formerly discussed and resolutions adopted in the regular order.

THE ASSOCIATION-RECORD

It was voted to publish the usual Association Record, which should be in the hands of members within thirty days after the close of the Convention.

PICTURE-EXHIBIT

Some new features will be inaugurated this year. Three pictures will be solicited from each exhibitor. These pictures will be submitted to a jury composed of three — one artist and two photographers of recognized ability. All pictures submitted will be hung. Those rating above 65 per cent will be placed in the Accepted Class; all others will be placed in the Rejected Class. No names will appear on pictures submitted. The jury will be present and upon request will give private criticism. Only accepted pictures will be cataloged. The Board has decided to purchase, not to exceed twenty of the best pictures exhibited, and will pay $25 each. These pictures are to form the nucleus of a permanent collection. All pictures for this exhibit must be received at the Auditorium, Atlanta, Ga., not later than June 9, 1914. Pictures received after that date will be returned *unopened*.

(NOTE.) The rating that will be given pictures, which compose this exhibit is the personal opinion of the judges, according to their understanding, and will be accepted accordingly, there being no recognized standard in photography.

PROGRAM

The program is designed to be of strictly educational character. It is not the purpose of the Board to show impractical or extraordinary work, but to teach the members how to use their appliances with understanding, with profit to themselves, and with an eye to a higher standard of photograph-making. With this in view, photographers of national prominence will be engaged to show the manipulation of light and the handling of the customer. These character-talks will be supplemented by a series of studio-demonstrations, conducted *entirely in daylight*, which will be managed by one or two of the regular demonstrators of the various plate companies; namely, Seed, Cramer, Hammer and Central. Plates will be exposed at these demonstrations and, within thirty minutes of the close of each demonstration, these plates will be shown developed on screens so that all can view them. Subsequently, these plates will be projected on to a screen by means of the Bausch and Lomb Balopticon, an instrument designed to receive a full-sized negative in a horizontal position, which is then projected on to a screen like a lantern-slide. While being projected, these plates will be worked in with background, retouched, etched with a knife when necessary — in short, all the latest ideas and methods of working up the negative will be fully carried out by expert retouchers in full view of the audience. After these negatives have been worked up, they will then be handed to the print-demonstrators, who will make prints from them on the various grades of paper. The print-demonstration will be conducted by the various paper-manufacturers, each in his own stall, fully equipped to show all the latest ideas in printing and masking the negative to produce the finest possible result. The rest of the program will consist of other educational features along business-lines.

THE DAILY PAPER

It was agreed that a daily publication of some nature would be of considerable interest and, therefore, the Board decided to allow Messrs. Abel and Chambers to publish a daily paper during the days of the Convention, and of which they will be given full charge. This paper will be called *The P. A. of A. National Daily*. It will contain a program of the day's proceedings, with interesting news-items gathered on the Convention floor.

AUTOCHROME-EXHIBIT

On account of the interest of the profession at large, and the general public in color-photography, the Board will assemble and exhibit a collection of autochromes and other color-processes.

COMMITTEES

Stationery, W. H. Towles; Buttons, L. A. Dozer; Headquarters, Homer T. Harden; Entertainment and Publicity, the entire board; Information, local committees appointed by the Atlanta Organization; Transportation, Homer T. Harden; Association-Record, Manly W. Tyree and Homer T. Harden; Legislation, R. W. Holsinger; Membership and Credentials, Walter Holliday and Joseph Knaffl; Applied Ethics, Ben Larrimer, Homer T. Harden and Miss Emma Gerhard; Progress of Photography, L. G. Studebaker, J. L. Cusick and O. W. Cole; Foreign Affairs, Pirie MacDonald, Eduard Blum and D. P. Thompson.

HEADQUARTERS

Hotel Ansley has been selected as the Headquarters for the Convention. The officers' regular reception to the members will be held there on Monday evening.

MEMBERSHIP

It was agreed to ask the manufacturers who have traveling salesmen to coöperate with the Executive Board to increase the membership of the Association.

The Secretary was authorized to conduct his campaign, also to work out plans whereby the Association *could be of service to the photographers every week in the year.* The Board agreed to recommend to the Congress a change in the dues of the Association, whereby those photographers, who are not able to attend the Convention, may belong to the Association upon the payment of a certain amount of dues, and that these members, upon the payment of an additional sum, will be given tickets of admission to the Convention. So far, the amounts which shall be recommended have not been determined.

EMPLOYMENT-BUREAU

The Board decided to establish at once a National Employment-Bureau, open to all members of the Association, without charge.

TEMPLE OF CHILDHOOD

The Board took up the current issue, The Temple of Childhood, and from the data it was able to gather at this time, it is its unanimous opinion that the operation of The Temple of Childhood, as it affects the photographic profession, does not foster the fraternal spirit which the Association has been trying to establish among those interested in photography.

WOMEN'S FEDERATION

Miss Pearl Grace Loehr and Mrs. Sarah F. T. Price presented the following report of their work up to date and their plans for future work:

January 1 letters were sent out by the President, Miss Loehr, to the thousand women-photographers on the list of the Women's Federation. On the same day letters were sent out by the Secretary of the Federation to all members of the Circle, giving the full plans for the Circle work and asking that photographs be submitted.

It is the purpose of the Federation to carry on a schedule of publicity in the prominent newspapers in the United States, telling of the work of women-photographers of this country. These accounts will be accompanied by suitable photographs made by women.

LOCAL PUBLICITY

In order to reach and interest the people of Atlanta in the Convention, the members of the Women's Federation have arranged to have pictures on display in the Atlanta Public Library several weeks before the Convention is held. The women of Atlanta will be reached through the Federation of Women's Clubs, and the young people of high-school and college age will be interested in special ways.

The women have taken upon themselves the entertainment of the visitors at the Convention. Arrangements have been made to serve luncheon in the Auditorium from 11 to 2, each day, and cold refreshments, at reasonable prices, at all hours of the day.

BOOTHS

The spaces sold to the manufacturers and dealers in Convention Hall will be provided with booths and decorations following a uniform plan, at the expense of the Association.

TREASURER'S REPORT

Treasurer Dozer's report shows the P. A. of A. treasury to be in its usual good condition, with a balance of $5,510.58 at the close of 1913.

A hearty vote of thanks was tendered by the Members of the Board to the photographers and dealers of Atlanta for their cordial reception during their stay in the city.

JOHN I. HOFFMAN, *Secretary.*

Bausch & Lomb Welfare-Work

FOR a long time the directors of the Bausch & Lomb Optical Company have been planning a scheme of "physical efficiency" which was finally put into operation at the beginning of the year. It is a movement looking toward the betterment of employes, and as such deserves high praise.

Each applicant for work at the Bausch & Lomb factory will be asked to allow a physical examination. It will not be compulsory, but there is little doubt of it becoming voluntary, when its advantages are understood by the applicant. The carpenter who is found to have poor eyesight will not be given the finer work to do, although he will be paid a carpenter's wages. He will be given carpenter-work that is not a strain upon his eyes, and which would eventually make them weaker, and at which work he would not be doing justice to himself or to his employers.

A man with a weak heart will not be put at a bench with a man who is perfectly sound in that organ, for it has been proved that in his endeavors to keep pace with the stronger man he works, in reality, double time, in the strain he puts upon his heart and nervous system. The man weakened with hernia will not be pitted against the man with perfect strength, although the pay will be equal, but each man according to his physical power will be placed where that power can work without physical drain.

Perhaps no better illustration can be found of the merits of the new system than in the case of one young woman, already in the employ of the company, who asked for the examination, and it was found that she possessed excellent eyesight, unusually acute hearing and was also a splendid penman. She had been employed in the packing-department doing thoroughly satisfactory work, but it was only natural that when her qualifications were demonstrated she was quickly transferred to the business-office, where good penmanship, quick eyes and acute hearing, particularly in telephone-calls, are of particular value.

Many of the employes who have been at the factory for years are taking the examination, realizing that if there are any physical defects about them, or some trouble lies latent, it will be well to know and eradicate it. Eyes, ears, and body are to be examined by a specialist in each line, and without cost to the employe.

The movement for better conditions along these lines is a natural outgrowth of the hospital established at the factory in December, 1905, and which is now being enlarged, and promises to be one of the most complete of its kind in the world. There will be a men's ward, a women's ward, an operating-room, offices for nurse and physician, as well as an X-ray room. The physician who has had charge of the work in the past will be the chief physician in the newer work and much that is now being carried out is the result of the work and research of Dr. Harold Baker, with whom the physical efficiency idea is a hobby, but whose work has had the support of the board of directors from the beginning.

The Bissell Colleges

A MAGNIFICENT collection of thirty-six portraits by J. C. Strauss, of St. Louis, was shown in January, through the courtesy of Sadakichi Hartmann, the art-writer and critic, and was an inspiration to the students.

Mr. N. Hartunian, of Armenia, won the February prize in the portrait-contest at the College.

At the College Camera Club's monthly contest, in January, the prizes were won by Messrs. Hopsecker, Hill and Zimpfer.

XUM

Professional Photographers' Society of Pennsylvania

Scranton, March 17, 18, 19

ALL plans are about completed for a rousing old-fashioned convention in the Town Hall, Scranton, with all the new and progressive features added. A big treat is in store for every member who attends.

MANUFACTURERS' EXHIBITS AND DEMONSTRATIONS

There will be a large number of manufacturers and dealers present, and their booths will be arranged with a view to make their exhibitions attractive, interesting and instructive. Many new things will be shown and demonstrated for the first time at this convention.

EXCLUSIVE EXHIBIT OF MASTERPIECES

There will be an exhibit of three masterpieces from each of ten of the leading photographers of America, outside the State Association. This exhibit itself will be a great treat and a rare opportunity to study the works of those who are by general assent recognized as the peers of the photographic world.

PRINT-EXHIBIT

A new departure of the print-exhibit this year, open to active and associate members, will be the classification of the pictures to meet the requirements of all classes of workmen, as follows:

Class "A" — Popular Cabinet Class — six pictures required. Any six pictures, cabinet size, mounted in your regular style, or all on one card. Prints to be made from negatives from which orders have been obtained.

Class "B" — Portrait Class — three pictures required. Any size above cabinet to 16 x 20. Prints to be made from negatives from which orders have been obtained.

Class "C" — Art-Portrait Class — three pictures required. May be made particularly for exhibition, displaying the individuality of the artist.

Class "D"—Commercial Class—three prints. Photographs of anything in the commercial line. Size unlimited.

NOTE: Pictures in any of the above classes may be sent framed or unframed, but *must not* bear the name of the photographer. *Let every photographer make an exhibit*, select the class that will be most beneficial to him, and prepare his exhibit at once. *Let us have the print-exhibit this year the largest ever.*

SPECIAL NOTICE: As it will require several days to judge and criticize the large number of prints exhibited, all exhibits must be in Scranton not later than Mar. 12, 1914, addressed to J. H. Kellberg, Vice-President, The Hotel Casey, Scranton, Pa. All exhibits for manufacturers should be addressed to W. G. McCaa, Secretary, Town Hall, Scranton, Pa.

CERTIFICATES OF RATING TO ALL WHO EXHIBIT

Herein is where each photographer profits by his membership. Whether he attends the convention or not, each exhibitor will receive a certificate of rating, showing the exact standard of his work. The certificate will bear the signature of all the Judges, and the markings will be known only to himself and the Secretary of the Association.

Particulars regarding printed criticisms and comments, and joint criticisms illustrated, will be found on page 98 of PHOTO-ERA for February.

DEMONSTRATIONS

Entirely new and novel methods have been arranged for demonstrations in Portrait- and Commercial-Photography by experts from the most careful pictorial to the everyday "bread and butter" style.

BUSINESS SIDE OF PHOTOGRAPHY

Practical and forceful talks will be given on studio-salesmanship and the business side of photography.

THE LADIES AND ENTERTAINMENT

Scranton's reputation for entertainment is too well known to comment further on it. Just come and see for yourselves. And remember we DO want the Ladies. Bring them with you and come early. Be on hand Monday evening, for there will be something doing every minute, and we want you to receive full benefit.

MEMBERSHIP

The annual dues are only $1.00. All employes of members will be admitted to the convention free.

J. B. SCHRIEVER, *President.*
W. G. MCCAA, *Secretary.*

B. Y. M. C. U. Camera Club

A SPECIAL exhibition of photographs made by J. C. Strauss, of St. Louis, Mo., is to be held in the rooms of this club March 4, 5, 6 and 7, from 6 to 10 P.M., also Sunday, March 8, from 2 to 6 P.M. All amateur photographers are cordially invited to attend.

Indiana Association of Photographers

THE Executive Board of this association has made arrangements for the nineteenth annual convention to be held at Winona Lake, Ind., from July 6 to 10 inclusive. Although seemingly a hard task, an attempt was made to get away from the old rut, and it is promised that the forthcoming announcement will prove to be a step in the right direction. At the suggestion of the Secretary, Mr. Otto Sellers, as many demonstrators as could be located were called into conference on the assumption that demonstrators are better acquainted with the rank and file of the fraternity than any one else and that nobody works harder than they to make conventions successful. The program thus worked out should prove novel and we believe well worth while.

Officers and members present at the three days' meeting of the Board included R. Morris Williams, of Evansville; First Vice-President, R. E. Smith, of Attica; Second Vice-President, S. A. Hockett, of Fairmount; Treasurer, C. A. Shubart, of Princeton; Secretary Otto Sellers, and Trustee George Graham Holloway.

Ketten's Motion-Picture Cartoon

MAURICE KETTEN'S copyrighted picture-story, "The Pleasure of Moving Pictures," which was published by courtesy of the Press Publishing Company (*The New York Evening World*) in our December issue, has proved entertaining and instructive to many. More forcible than the printed word, this product of the artist's pen has served to correct the impression which prevails in many minds that motion-pictures actually move on the screen. This, as a matter of fact, is not so. Motion-pictures do not differ from ordinary stereopticon-views — which sometimes are seen to move when the stereopticon is carelessly moved or jarred — except that the pictures to be projected are on film instead of on glass, and are shown on the screen at the rate of sixteen per second.

Rising to the occasion—

meeting the requirements of the situation, whatever it is—that is what you want to feel that the lens in your camera is doing—so that you can undertake the things in photography, indoors or out, that are impossible with an ordinary lens.

Bausch and Lomb-Zeiss TESSAR LENS

gives you this sense of mastery, for this superb lens solves every problem. The Ic Tessar, with *three times the speed* of an ordinary rectilinear lens, its wonderful illumination, its perfect definition, overcomes obstacles in speed and light that so often spell defeat. The IIb Tessar, readily adjustable to almost any hand camera, has *61% more speed* than ordinary rectilinear lenses. It makes possible picture-taking on grey days or under the most difficult conditions, either in the house or out-of-doors. You will be delighted, too, with the splendid CONVERTIBLE Protar Lenses, surprisingly rapid and with many uses.

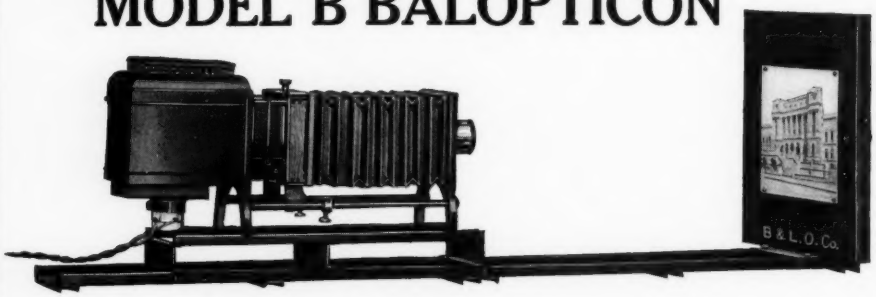
We will gladly send you a sample print and information regarding lenses. You can try a Tessar on your camera. Ask your dealer.

Bausch & Lomb Optical Co.
622 ST. PAUL STREET ROCHESTER, N.Y.

XUM

Enlarging and Lantern-Slide Making with

MODEL B BALOPTICON



Model B Set Up for Enlarging (with Incandescent Lamp)

Three Outfits in One:

Balopticon for Lantern-Slide Projection, Enlarging-Camera and Lantern-Slide Camera

Accessories for enlarging and lantern-slide making include:

1. Special Holder for negatives up to 4 x 5 in., an area approximately 4 in. in diameter being illuminated.

2. Easel-Board, accommodating 11 x 14 in. paper, held either vertically or horizontally.

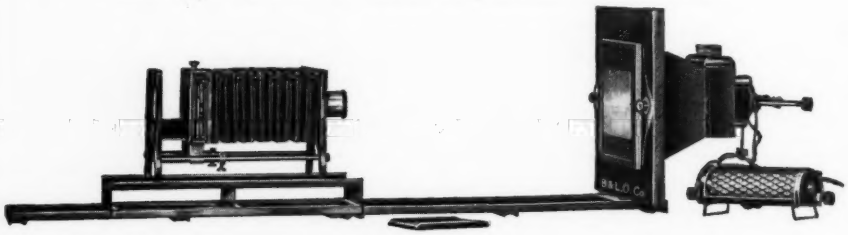
3. Frame for holding negatives up to 5 x 7 in. —attaches to easel-board after removal of central portion of board; lamp-house with ground-glass attaches to back of easel-board and illuminates negative.

4. Special Frame, fitting in slide-carrier support and taking ground-glass and lantern-slide plate-holder.

5. Metal Tracks with mounting for Model B Balopticon and easel.

Model B Balopticon is supplied with either arc, incandescent or acetylene lamp, as desired, and may readily be used separately for regular projection.

Send for special circular or further information.



Model B Set Up for Lantern-Slide Making (with Arc-Lamp)

BAUSCH & LOMB OPTICAL CO., 622 St. Paul Street, Rochester, N.Y.

XUM

LONDON LETTER

CARINE AND WILL A. CADBY

Baron de Meyer has returned from a visit to the States and it appears to have been anything but an idle one, judging by the many portrait-studies he has brought back with him. One wonders if the American beauties were as proud as those in England to be made famous by him. Some of the best of his studies are being published by our illustrated papers and are simply masterly in treatment and technique. Truly, Baron de Meyer is the Sergeant of photography. Those of Mrs. Ogden L. Mills and Mrs. Ralph Thomas seem to be the last word in portrait-photography, and Mrs. Harry Payne in an ancient Egyptian fancy dress is an exceptionally pictorial bit of photographic work. The same magazine that published some of Baron de Meyer's unphotographic and pictorial portrait-studies gives us a little shock, for as we turn over the page, still seeing these decorative and distinctive pictures, we are crudely bumped against hard reality by a full-page illustration of the artist himself and his wife. "The Baron and Baroness de Meyer" is written underneath one of the wickedest libels of journalistic snapshots, for not in their most unlucky moments did they ever look like this.

Mr. Hoppé has sprung a surprise on his brother-photographers. We all knew that he was a talented camera-man, but we learned this Christmas that he is a gifted draughtsman as well, for his greeting-card to us was a reproduction of a clever little pen-and-ink drawing, called "The Tango — A Black and White Fantasy." The two carnival figures dancing are as attenuated as fashion's devotees are trying to become, and there is a grace, movement and charm about it that reminds us of the Munich school of draughtsmen. We hear that it has been published in Photo-Era for February, page 103, and we are eager to know if Mr. Hoppé will pursue this new path he has struck out.

Plate-makers have been getting into trouble lately with a body of photographers who call themselves the "Photographers' Union." These militants threaten a boycott, for their grievance is that photographic manufacturers are growing rich too quickly, and that the price of plates, which over here has risen alarmingly this last year, is out of all proportion to their actual cost. Probably, if it is a fact that all photographic plate-makers are becoming millionaires (which one cannot but doubt in spite of the P. U.), it is because photography is becoming more and more popular and each year sees a great increase in the consumption of plates and films.

Every firm we hear of is enlarging its premises or moving into new ones. Mr. Thomas Illingworth, who is so well known for his photographic papers, has moved into larger works and when we hear of this firm coating three miles of paper — some of it 4 feet 6 inches wide, too — a day, one imagines that space must be somewhat necessary. After this we can keep cool when we hear of the millions of postcards they turn out and the ten tons of ice that their refrigerating-machine makes a day and the twenty-feet-long bromides they made for the exhibits of the Australian Commonwealth.

But carbon tissue is, perhaps, the product on which Mr. Illingworth first built a reputation, and this is on sale in the States. Besides increasing the number of printing-colors lately to fifty, he manufactures thirty different surfaces of transfer-papers. This, in our opinion, is the right direction in which to work to make carbon-printing universally popular, for in the old days there was no choice in surfaces, which, when printing varying subjects, was a serious drawback.

Considering the simplicity of the process — the only requirements being hot and cold water and a little alum — it is astonishing that, for certain subjects, every amateur does not adopt it.

The festive season of Christmas and the New Year are well-nigh over. The Christmas numbers of the monthly magazines are long since forgotten, as the tendency is to get them out earlier every year. The result is that the January numbers are fast developing into a sort of second edition, and are just as full of so-called "seasonable" subjects as the December issues. The prevailing note this year has been the increased use of color-reproductions. Some of our own Swiss winter figure-studies have been so well done (notably a frontispiece to the *Ladies' Realm*) that friends have mistaken them for color-reproductions from actual autochromes. This is certainly a high tribute to the reproducer's work.

As illustrating the marvelous way photography for purposes of illustration and advertisement is going ahead, there can hardly be a better example than the year-book, called *The Salvation Army Social Work, 1913–1914*, which has just reached us. In this really wonderful volume, Mr. David Lyell has one hundred and fifty camera-studies of what are quite truthfully called, "Pictures of Joy and Sorrow," for each one certainly tells its story most graphically. Mr. Lyell has not only taken photographs of his subjects, but in some wonderful way he has got life and movement into them. We feel that we are actually seeing the active work of the Salvation Army amongst the peoples of the world going on before our eyes. The range of subjects and locality is immense. On the same page are pictures of boys learning to do dairy work at Lytton Springs Farm, U. S. A., and a colony of ex-prisoners in Switzerland. We turn over the leaf and are confronted with "Army Officers" (all women) at work among the hop-pickers in Kent, England, and an excellent interior of mothers and children in a Whitechapel (London East End) shelter, only to be transferred on the following page to far Japan, where we see the Salvation Army's "Prison-Gate Home," before which are standing a big group of Japanese men, presumably and certainly looking ex-prisoners.

But we have only lightly touched on the subjects dealt with. There are a few obviously posed pictures — notably, "As we find the Homeless at 2 A.M.," which is complete, even to the policeman on duty — that are not as convincing as some of the less perfect, but more spontaneous photographs; but as a whole the book is an object-lesson, both to photographers, generally, and to advertising-firms, for never have we come across such a graphic and appealing advertisement; and not the flintiest heart, after studying the pictures, could withhold a subscription.

The Paget Color Plate seems to be interesting many amateurs. We continually come across specimens. The great advantage of the process, apart from its comparative cheapness, is that when once the photographer has achieved a "paradestück," he can produce any number of duplicates by simply making positives and inserting the special color-screen (made for the purpose) behind it. The chief drawback seems to be the failure to get vivid and true color-rendering, at least in unskilled hands. There is a tendency, too, for the colors to go wrong if the plate is not looked at exactly squarely. But this is, no doubt, a fault of the worker, not the plate, for we have seen many excellent examples of color-photography made on Paget plates.

XUM

BERLIN LETTER

MAX A. R. BRÜNNER

In this present year there are two memorial days identified with photography. In January, 1914, seventy-five years had passed since the Frenchman, Daguerre, and, a little later, the Englishman, Talbot, astonished the world with two discoveries which form the basis of present-day photography. The famous scientist, Arago, declared on the seventh of January, 1839, in the Paris Academy of Sciences, that the painter Daguerre had been successful in obtaining permanent pictures of any object by means of the light on particularly-prepared silver plates. The process, about which the inventor rigidly refused to give any particulars, was the result of troublesome work lasting for years, during which time he was assisted by his countryman, Nièpce.

In order to understand the value of the invention, we should remember that the camera-obscura at that time was a box with smoked inner walls, fitted on the front side with a lens and on the back with a sheet of opal glass. The people watched with amazement the subtle pictures which the lens threw upon the focusing-screen. In the year 1814 Nièpce began in the city of Châlons-sur-Saône his experiments, to make these pictures of the camera-obscura permanent. He employed for this purpose a solution of asphalt in lavender-oil spread upon a copper-plate which was exposed in the apparatus for several hours to light. In this way he obtained plates which, after a further suitable preparation, could be used in the printing-press, and to these pictures he gave the name "Heliographs." By some accident Nièpce learned that Daguerre was making similar experiments in Paris. Both men coöperated and when Nièpce died, Daguerre continued the work in the very strictest seclusion — not even his best friends were admitted into his laboratory, until at the end of 1838 he believed that he had reached his goal and applied to three members of the Paris Academy — Humboldt, Biot and Arago.

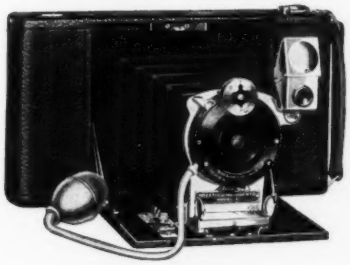
These gentlemen induced the government to grant a yearly revenue of six thousand francs for him personally and four thousand francs for the son of his late assistant. Thus, at last, he consented to reveal the secret, and in August, seventy-five years ago, Arago was able to make public at a meeting of that noted academy the principles of the new art which was called "Daguerreotype." As is probably known, Daguerre employed a silver-foil covered with silver iodide which, after exposure in the camera, was treated with mercury-vapors. He obtained thus a true image of the particular object in black and white. The new art caused immense excitement; everybody was eager to try it, and the shops of the druggists and opticians had to endure a real storm.

There was, however, a great drawback connected with the invention, which consisted in the fact that only one picture could be obtained from each exposure. This was overcome by the discovery of the Englishman, Fox Talbot, who reported about it to the Royal Society in London the same year. He pressed drawings and similar flat, transparent objects against paper, which had been treated with silver chloride, and exposed this to light. He obtained a reproduction with reversed colors, viz., a negative. Using the latter in place of the original, he was able to produce an unrestricted number of positive copies which, besides, showed the correct distribution of light and dark. These pictures, however, looked very rough compared with the delicate daguerreotypes. But this shortcoming was removed when glass plates were used. The development of photography has been so enormous that it is needless to explain it. But it was not unexpected, for as early as January, seventy-five years ago, Arago had predicted the immense significance and importance of photography in the various fields of human activity.

The data just given were the object of a lecture recently given at a meeting of an amateurs' society of this city which the writer attended. An equally interesting topic was treated at another club, where the lecturer spoke on photographing without light. Perhaps some readers will call this nonsense, as the term, "photography," implies the use of light. On the other hand, we have in the meantime been accustomed to rays which are invisible, such as the ultra-violet, the Roentgen and radium rays which act upon the sensitive plate. And yet there are other strange ways to produce pictures without light. Polished metal plates having been brought into contact with bromide of silver plates, act upon the sensitive layer, tracing the outlines upon it in complete darkness as is ascertained after developing them. In the same way oil, fat, grease, wood, seeds, leaves, etc., produce pictures without light and lenses. We are thus able to obtain images of pressed plants, also the structure of feathers and wood, portions of blossoms and the like. Starch, sugar and rubber, however, do not show this remarkable effect. Equally effective is the color of printed types on account of the varnish and turpentine-oil contained in the inks. The lecturer showed several really striking examples of contact-prints of a printed sheet from a book, obtained without any light. This must not be confounded with producing a positive print without a camera by putting a printed page or the like in the printing-frame in contact with sensitive paper, for this is the ordinary printing-process with light. In our case even the immediate contact of object and plate is not necessary; a picture is even produced if cardboard and other material is inserted between. We are enabled to photograph landscapes without light, during the night, as a Mr. Zengerin has shown in the eighties. From a room in Geneva, he has photographed the lake and the surroundings by exposing a glass plate which was covered by a brilliant color for three minutes, which plate he brought afterwards into contact with a sensitized plate. The latter was developed in the ordinary way, and the finished print did not show any difference from one made with light. The experiment has been repeated by others, including the lecturer, whose address the writer heard.

Several times the scientific theater, The Urania, of Berlin, has been mentioned in my correspondence. This useful institute has added a new department, viz., an archive of films for educational purposes, to which the large kinematographic firms of Germany and other countries have contributed considerable material. At the beginning of this year 25,000 yards of scientific films were in the possession of the Urania, which will be used in the following way. Every teacher in the city, irrespective from what school, will be shown, upon application on any forenoon, any desired film, for which service only a small charge is made, and as many pupils are admitted as the lecture hall will hold. In the afternoon illustrated lectures, dealing with topics treated in the schools at the particular time, are given in very simple language, stationary as well as motion-pictures being employed. This new department was organized by Mr. Goerke — the director — two teachers from a university, two from an elementary school and an eminent photographic expert. Connected with the archives is an information-bureau open to everybody.

The Biggest CAMERA-VALUES on the Market



No. 3A FOLDING INGENTO

Model 3

For Pictures 3¼ x 5½ Inches

YOU, who are going to buy a new camera this Spring, will do well to consider the peerless Ingentos. The model shown above is in great demand.

The No. 3A, Model 3, offers the be ginner and other amateurs, who wan a fixed-focus folding camera of the highest quality, the best possible valu for the money. This camera is built or the lines of the No. 1A and No. Folding Ingento. Metal body, covere with genuine cowhide leather, brillian hooded finder, universal focusing-sto achromatic meniscus lens in an Ile Automatic Shutter.

REVISED PRICE

No. 3A Folding Ingento, Model 3, **$15.0**

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Camera

REVOLUTIONIZED

PHOTOLOID comes both translucent and opaque—paper is made in opaque only.

The difference in the permanence and beauty of appearance between PHOTOLOID and ordinary print-paper is so great that the difference in cost is not worth considering.

PHOTOLOID is made in Porcelain White Opaque, Veined Ivory and Cream translucent. Blacks, Sepias, Olives and Grays printed by direct development.

PHOTOLOID takes watercolors easily, making wonderful miniatures. Assur colors produce beautiful results.

PHOTOLOID is ideal for transparencies.

Its Important Features in brief:

1 ⟶ IMPERISHABLE.
2 ⟶ NEEDS NO MOUNTING.
3 ⟶ NON-CURLING.
4 ⟶ WASHABLE.
5 ⟶ QUICK-DRYING.

Packets of dozen	Half gross box
$ .90	$ 5.00
1.25	7.00
1.75	10.00
4.00	22.50
7.00	40.00

Write to us. We will promptly fill all orders ***the color and size desired.***

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Company **55 Fifth Avenue**
NEW YORK

Photographic Advertising

WITH THE TRADE

"Sail from Boston"

THIS trade-slogan of the Hamburg-American line is one with which PHOTO-ERA is heartily in sympathy. While not America's greatest city, Boston appeals strongly to every true American. Although it is a liberal education to have seen the sky-scrapers of New York, every patriotic citizen aspires sometime to visit the Revolutionary landmarks of Boston and vicinity — literally the cradle of the Republic. And why not in connection with a trip to Europe?

A few days in Boston previous to sailing will prove well spent. Present-day Boston, as well as the Boston of long-ago, has much of appeal, including the Boston Symphony Orchestra, Boston Opera, Art Museum, Harvard University, splendid hotels, theaters and restaurants, and a magnificent park-system.

Boston is the nearest large American port to Europe and its harbor is notable for the facility and safety of its approaches, the ample width and depth of its entrance, and the shelter of its roadsteads, which are not surpassed by any harbor in the world. These conditions and the tremendous recent growth of the city commercially led to the splendid service of the Hamburg-American line between Boston and Hamburg, Germany, with ports of call at Plymouth and Boulogne. The service will be maintained by the well-known twin-screw steamers *Amerika*, *Cleveland*, *Cincinnati*, *Fürst Bismarck* and *Rhaetia*. These ships are provided with every reasonable comfort and the latest safety-appliances. The accommodations in every cabin are excellent, the rates low and the passage short. Camerists sailing for a spring- or summer-vacation in England or Europe will make no mistake in booking by this route.

Seltona

SELF-TONING papers are simplest of all in manipulation, and Seltona continues among them unrivaled for combined detail, brilliancy, depth, softness and delicacy. It has a beauty all its own that appeals strongly to all who see it. Printing out in sunlight, Seltona needs fixing only for brown and sepia tones, or previous immersion in a solution of common salt for any shade from dark brown through purple to blue. Black tones may be had by platinum-toning. Paper, post-cards and boardoids are made in six grades: matte smooth, cream smooth, glossy, linique, antique white, antique cream. For prices, apply to the sole U. S. agent, J. L. Lewis, 522 Sixth Ave., New York.

Flashlights by Victor Methods

Two advertisements elsewhere in these pages describe methods by which successful flashlights may be obtained. The line of well-known flashlight-specialties manufactured by Jas. H. Smith & Sons Co., of Chicago, covers every need of the amateur or professional, including Actino Flash-Cartridges, the Dependable Flash-Lamp and Bag using Victor Flash-Powder and the Victor Studio Flash-Cabinet for portraiture in the studio. This machine will render any studio absolutely independent of daylight for the making of bust, half or full-length portraits. Send for a descriptive booklet, stating the sort of work you are doing.

An American Convertible Lens

AMONG moderate-cost American lenses the Ilex Three-Focus Convertible stands high. The workmanship is good and the quality of the image soft but clean-cut in definition. There is, of course, a distinct advantage in a three-focus type of lens for varied work, and this one costs only $30 in 4 x 5 or 3¼ x 5½ size. It will be sent on ten days' trial with the understanding that the money will be refunded if not satisfactory.

The Viopticon Fills a Need

THAT there was need of a small-slide stereopticon has been shown by the success of the Viopticon. Although this is veritably a "pocket-edition" stereopticon, it produces an image of the same size and brilliancy as the standard-size instrument. The slides are cheaper to make and cheaper to buy — an object to the amateur camerist. Viopticon stock slides on thousands of interesting subjects may be had at 10 cents each.

Simplified Use of Assur Color-Medium

THE directions for use of the well-known "Assur Coloring-Method" have been further modified by a change in the instructions for the use of color-medium. Formerly it was stated that "a small quantity of the desired color is taken and rubbed up on the palette with but very little color-medium." Absolute uniformity was impossible, because one could not be certain of the quantity taken up at different times. This difficulty is now entirely overcome, absolute uniformity is assured and the manipulation is much simplified by the following method:

In about 1½ ounces of turpentine dissolve about 60–100 drops of color-medium and use this solution for mixing the colors. The linen is wrapped around the index-finger and dipped into this solution. The color is then taken up and thoroughly rubbed up on the palette and applied to the photograph with a circular motion.

For washing-in clouds or highlights, pure turpentine should be used.

New Instanto Circulars

FROM The Photo-Products Company, 6100 La Salle St., Chicago, Ill., come two very interesting circulars which have been prepared for the amateur trade. One, "What Others Think of Instanto," gives the opinion of several users of this popular and inexpensive developing-paper and tells about the special introductory trial-offers. It also gives the prices on the new developer and acid-hypo packages prepared particularly for Instanto. The other circular, "Your Questions Answered," anticipates the numerous questions which might arise in the amateur's mind, being unaccustomed to buy direct from the factory.

We understand that these circulars are to be mailed to all Instanto users. If you are not acquainted with the merits of this remarkable paper, it would be well to ask for these circulars, or, better still, send 25 cents for three sample-dozens as mentioned in the advertisement in this issue. Your quarter will be returned if you are not satisfied, and an extra one besides.

XUM

Two New Printing-Papers

THE year 1914 promises to be productive of many additions to the already long list of photographic products from which the enterprising camerist may choose. The printing-paper field seems to be particularly active. Already two new papers have appeared prominently on the market. Ansco Company offers Cykoro, a paper yielding a great variety of tones, and Willis & Clements are prepared to furnish their long-expected product, Satista, a platinum and silver paper.

Satista

THIS is a new daylight-printing paper of unusual rapidity, yielding results scarcely distinguishable from the well-known Platinotype, and at much lower cost. As a daylight paper it is unusually rapid, normal negatives requiring one-half to three minutes in bright sunlight or about five minutes on cloudy days. The coating contains silver as well as platinum salts and so is sensitive enough to be printed conveniently by a strong artificial light, such as an electric arc.

Satista produces prints of great beauty and permanence in two tones — black and warm black; they are of artistic quality, luminous and full of atmosphere, with clear and sparkling blacks, rich and transparent shadows. The paper as well as the developer, clearing- and fixing-chemicals are inexpensive, and no toning is required. The manipulation is simple and to those who know the Platinotype process it will seem familiar. Satista is exposed until a faint grayish image shows detail in all but the highest lights. It is developed for half a minute in a developer made up of Satista Salts containing potassium oxalate and oxalic acid, cleared in two baths of potassium binoxalate, washed for ten minutes, fixed in a hypo bath and finally washed in running water for three-quarters of an hour. Warm black tones may be had by the addition of mercuric chloride to the developer and using at a temperature of 140 degrees. Prints may be dried between blotters under pressure, or in any other convenient way. They lie flat and are enhanced in beauty if hot-pressed or dry-mounted.

Cykoro

THIS new developing-paper yields rich, beautiful and varied tones, and is adapted to high-class studio-work. Cykoro means gold Cyko, and was so named because of the characteristic gold tone-effects obtainable with this entirely new product. It will produce in a simple, direct manner those effects and that range of color-tones which heretofore have been obtainable only with difficulty and uncertain permanence.

A slow-printing paper having great latitude in exposure, Cykoro develops at once to a brilliant tone, and to judge the color properly it should be developed in a white light, such as a 16 candle-power electric bulb at a safe distance. For printing, a pair of 100-watt tungstens, a Nernst or Cooper-Hewitt lamp is desirable.

The tones obtainable are, in order, deep green, olive green, warm olive, cool sepia, sepia and red chalk. The deep green requires the shortest exposure and the most concentrated developer, and as the tones increase in warmth the exposure is correspondingly increased, while the hydroquinone developer is proportionately diluted. Normal development is from 1 to 1½ minutes, except for red chalk, which is about 2 minutes. Prints intended for gold toning are passed through an acetic acid short-stop, otherwise directly into an acid-alum fixing-bath.

Toning requires 5 to 10 minutes, and the bath contains a relatively small quantity of gold. It is, in reality, not so much a toning-bath as it is a bath to fix the color of the developed prints. From the toning-bath the prints are transferred to the acid-alum fixing-bath for fifteen minutes, and finally washed in running water for one hour.

The Marion Record Plate

THROUGH the courtesy of the importers, Allison & Hadaway, New York City, it was the writer's pleasure last month to expose a sample box of Marion Record Plates. As the rating of 500 H. & D. would place this plate in Class 1/3 of the PHOTO-ERA list of plate-speeds, a test was made on this basis. The week before, a trial had shown that on a film and also a plate in Class 1 an exposure of three seconds at F/6 was correct for a window-portrait at home, and so one second exposure was tried on the Marion Record Plates for the same subject. The results were fully timed and of splendid quality — well-balanced gradation, rich in silver, clean-cut in definition, free from fog and fine in grain. A better plate for portrait-work in dark weather or high-speed work could hardly be wished for.

Ernemann Cameras

THE Meyer Camera & Instrument Company, importer of cameras and photographic specialties, desires to inform its friends that it still has a large supply of directly-imported Ernemann cameras which it is prepared to dispose of to all those who desire a good camera of foreign manufacture.

The Mayer Camera & Instrument Company has met with exceptional success in the sale of imported Polygon cameras fitted with Rietzschel Double Anastigmat lenses. This camera is included in the class known as miniature cameras, thus actually fitting a vest-pocket, and, in spite of its small size, it is remarkable for its superb workmanship and absolute efficiency.

The same style and quality of cameras can be had in sizes up to 5 x 7, at prices to suit everybody in the market for a high-grade camera.

Montauk Bromide Paper

FOR enlargements and soft contact-prints this paper is excellent and the splendid quality of its tones exceptional. It is made in nine surfaces, including buff and double-weight stock. A sample package of this paper will gladly be sent free of charge to PHOTO-ERA readers upon application by letter to G. Gennert, 24 East 13th St., New York; 320 So. Wabash Ave., Chicago; 682 Mission St., San Francisco.

Korona Folding Studio-Stand

THE original model was invented by an expert home-photographer who found the need for a light, portable and rigid stand which would do the work of a regular studio-stand. The original was improved by the Gundlach-Manhattan Optical Co. and the stand we describe was finally evolved. It is a tripod with three legs opening simultaneously and not closing again until desired. When set up, the stand may be moved around and will slide smoothly over any kind of floor. It cannot be upset accidentally and is just as safe on a tile floor as on a carpet. The center-post is adjustable for height from 31 to 45 inches and the tilting top is adjustable for inclination. It is perfectly rigid and will carry an 8 x 10 camera as easily as a smaller size. The woodwork is made of cherry, finished in walnut and the metal parts are aluminum. It weighs 5½ pounds and its maximum height is 53 inches.

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